

THE COMPLETE GUIDE TO ELECTRONIC GAMES

PLUME 

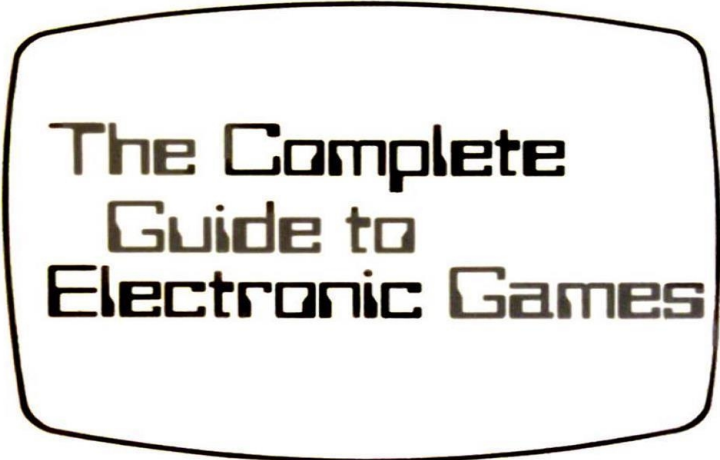
OVER 170 GAMES FOR CHILDREN AND ADULTS
DESCRIBED, COMPARED, AND RATED FOR PRICE AND PLAYABILITY.
FULLY ILLUSTRATED WITH 153 PHOTOGRAPHS.



HOWARD J. BLUMENTHAL

ELECTRONIC EXCITEMENT

Whether you're looking for a game for a child, an adult or the whole family; whether you want a sports game, an action game, an adventure game, a brain-testing game, a video game, an educational game, or any other; whether your budget is \$15 or \$450—this guide tells you what you have to know to choose the game you're looking for, and to discover others you may not have dreamed existed. Illustrated with photos, written with thoroughgoing practical knowledge and pervasive enthusiasm, this unique shopping guide will give you all the buying information you need to pick and choose among the vast array of electronic games on the market.




The Complete Guide to Electronic Games

ABOUT THE AUTHOR:

HOWARD J. BLUMENTHAL is a New York-based television producer who himself has designed over 300 television games, in addition to being a fully accredited electronic games buff.

The Complete Guide to Electronic Games

by 

Howard J. Blumenthal



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For my wife, Shari
Thank you

Acknowledgments

Whenever a book such as this is written, there are dozens of people working behind the scenes to make it happen. In this case, most of that work was done by people in the toy industry. My most sincere thanks to the following people, and to the others who answered my questions and responded to my requests with interest and concern: Janice Bender, Ginny Juhnke, Margaret Keenan, Peter Nasca, Mitch Deutsch, Susan Fedyck, Barbara Gemme, Jim Mueller, Dan Garza, Andy Gatto, Mick Neveldine, Debra Sussan, Eileen Barme, Helen Fleischer, Mary Foote, Janet Willis, Jack Fox, Kathy Lockton, Tom Harrison, Dick Badler, Dave DeMala, Sonia Stern, Zeke Rose, Don Hall, Barbara Wruck, John Brady, Lee Gelber, Dan Radeke, Jackie Markham, Barbara MacDonald, Randy Rissman, Bill Pasco, Dean Gavin, Mary Blazina, Gary Sharpe, Murray Singer, and Peggy Shane.

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Enjoy the book.

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Preface

This is a book for people who like to play games. I wrote it because I like to play games, and because I'm fascinated by electronic gadgets. I hope in reading the book you'll pick up some hints on buying a game, and that you'll become a bit more comfortable with the computer revolution.

There are over 400 electronic games available on the retail market, with the actual number varying on almost a daily basis. I've reviewed nearly all of the best games, eliminating only the "me too" games, those designed as copies of successful games. The market is still fairly new and still a bit volatile, so it is best to buy carefully.

When you set out to buy, stick to reputable stores. Avoid discontinued games, and concentrate on the most reputable manufacturers' products. Milton Bradley, Parker Brothers, Mattel, Texas Instruments, Ideal, and Selchow & Richter (of SCRABBLE fame) are among the most reliable makers of electronic games, though buying from these companies does not necessarily guarantee a flawless product. The use of chip circuitry is still relatively new, and you will occasionally come up with a lemon (generally due to faulty manufacture of the chip itself). Try the game in the store, and be sure to play it often during the retailer's grace period. It is best to exchange the merchandise if it does not function perfectly.

All major manufacturers offer warranties on their products, and each manufacturer has its own plan. With a few exceptions, the terms usually cover up to ninety days from purchase date for repair or replacement (at the manufacturer's option). Most require proof of purchase when a unit is returned—at your expense—to the manufacturer. You won't find a local repair shop willing to fix your electronic game; if it breaks, you'll be dealing directly with the manufacturer. If your game stops working after the warranty period, you'll have no choice but to send it back to the manufacturer. There's usually a flat fee of \$5 to \$10 per repair, but be wary of higher fees, especially among smaller manufacturers. Read your warranty when you buy the game, and *never buy a game without a manufacturer's warranty* (REMEMBER, they're the only ones who can fix it). Know what you are buying.

Nearly all the games on the market are powered by batteries, the number and size of which vary greatly among games, even within the product line of a single manufacturer. You will find that alkaline batteries (Duracells and Eveready Energizers are among the best known in this category) are the best values, lasting several times longer than heavy-duty batteries. You'll find that many

games can be powered by an AC adapter instead of batteries, but you must choose the adapters very carefully. The connecting plugs and jacks come in about a dozen formats, and the voltage can run anywhere from 3 to 9 volts. Be sure to refer to each individual game's instructions before you buy an adapter. The wrong adapter will destroy your game—and void your warranty. (All 9-volt transistor batteries, incidentally, can be replaced by a device known as a "clip adapter," which transforms household current and plugs directly into the pair of 9-volt contacts that most of us have encountered inside transistor radios. You might find a clip adapter at your local hardware store.)

I have tried to supply all the information you will need to buy an electronic game from a retailer. Included are over 200 of the top-selling games, with the results of my examination of them. Most of the entries describe in some detail how the games are played, while others simply highlight the unique points of a particular unit (this highlighting technique is used most often in the sports chapter, where many of the games are played in similar ways). Also listed are the power requirements and approximate retail prices of the games. You will find that these prices vary widely, primarily because of heavy discounting.

The recommendations that end each entry in the book are based on my work with test groups of various age characteristics. When one group liked a game, nearly all the others concurred, and games with unoriginal formats were generally put aside. My measure of their reactions takes the form of stars: A 5-star (* * * *) game is the best in its category, with a clever game concept, captivating features, an effective design, and the ability to hold a player's attention for long periods of time on multiple occasions. Four-star (* * * *) games are usually very good, but the enjoyment of play is somehow abridged by a single detracting feature: a too-small playing field, too-difficult a game to win, etc. A 3-star (* * *) game is basically a good investment. It appealed to most of the test groups but did not feature any clever concepts beyond the game itself. A 2-star (* *) game lacks an essential of a good electronic game, and a 1-star (*) game lacks several. These offer an ordinary play concept without the necessary extras to make the games fun.

I hope you will find this book helpful in the selection of your own electronic games. With the advice that you play any game before spending \$20 to \$50 or more to buy it, I ask that you read this book for the same reason I wrote it. For the fun of it.

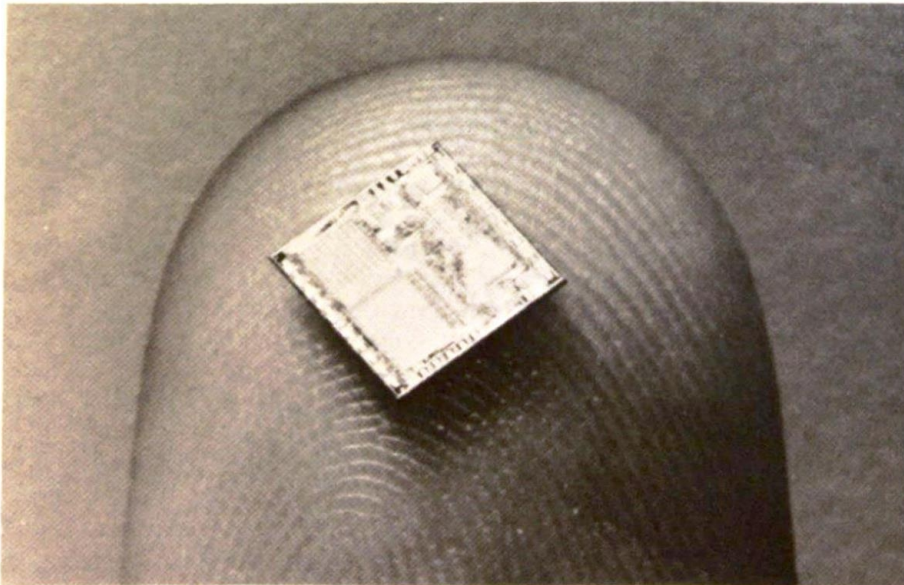
H.B.

New York City, 1980

Introduction

Five years ago there was no such thing as an electronic game. Ten years ago there were no calculators. And 15 years ago, household computers were considered a futuristic venture suitable only in a world filled with robots and electric cars. Today, several million people routinely record their favorite television shows for later viewing, and many of us travel abroad with a pocket-sized language translator instead of a phrasebook. This revolution occurred because of the great advances made in the electronics industry, most notably in the invention of microprocessor "chip" circuitry.

A "chip" is a tiny piece of silicon (roughly the size of a child's fingernail), with a photographic etching of a complex electronic circuit embedded in its surface. This chip is, in effect, a series of electrical circuits, which can be programmed with the intelligence needed to operate a clock, regulate a microwave oven, and perform addition, subtraction, multiplication, division, or any of the functions formerly associated with slide rules. Chips are used in highly sensitive hospital equipment, personal computers, railroad switching systems, telephone circuits, smoke alarms, digital speedometers, and video disc machines. Chips are used most often, however, in electronic games.



When you consider that half a billion dollars was spent on hand-held electronic games (not including video games) last year, you will begin to realize just how many electronic games have been produced. Over 300 million electronic games have made their way into our homes in only four years (that's roughly one for every man, woman, and child in the USA). Unofficial toy industry sources verify these figures, noting that most of the money is being made by the biggest manufacturers of these gadgets: Milton Bradley, Mattel, Parker Brothers, Kenner, Coleco, and a few others. All of these companies were previously engaged in a traditionally conservative business—the manufacture of toys and games. Today, these companies create machines that are in reality special-purpose computers, placing them at the forefront of the computer revolution.

The change first took hold in 1972, three years after Texas Instruments engineers developed the silicon chip. The four-function calculator was the first mass-market item to become popular, originally for prices as high as \$100 for a rudimentary device that could add, subtract, multiply, and divide. Prices dropped quickly, and new designs were introduced with remarkable regularity. Casio was a leader in creating innovative calculators, pioneering the marketing of small devices with clocks and stopwatches in 1977. Sharp, Hewlett-Packard, and Texas Instruments introduced calculators specially designed for business analysis, scientific applications, and schoolwork. Credit-card-sized calculators appeared in the late seventies, with pressure sensitive pads replacing buttons on the keyboard. Manufacturers enhanced their products by adding musical notes to each key, alarm clock circuits, and ultra-flat or ultra-miniature formats. Some enterprising game inventors even created books full of games that could be played on calculators, trying to ignite a fad that never quite took off.

Digital watches have been around for about as long as calculators, selling for no less than \$200 in 1973. Today's digital timepieces are available in either light-emitting diode (LED—red glowing digits) or liquid crystal (LCD—black digits on silver background) models, some for as little as \$20. Calculators that talk and voice-recognition machines will be available in the early 1980s.

The Craig corporation, along with Texas Instruments, Lexicon, Panasonic, and several others, has taken the calculator format a step into the future with language translators. These special-purpose, hand-held computers first appeared in early 1979, featuring removable memory modules containing lists of words in French, Spanish, German, English, and other languages. These devices usually contain several thousand words, accessible via alphabetic keyboard. The Texas Instruments translator even has a speaking voice.

Personal computers have been popular consumer electronics items since the late 1970s. The newest hand-held computers are as small as calculators. Quasar's Micro-Information System includes a full-function keyboard and a set of add-ons to rival the biggest computer systems designed for home or business use. And it all fits into a briefcase.

High-quality audio and video products proliferate. Sound systems now offer near-perfect reproduction due to the computerized "digital" process of recording and playing back sound. Video discs and cassettes offer a vast array of movies and specialized television programs, again because of the new developments. The video environment has been further advanced by low-cost information retrieval systems like England's PRESTEL, a videotext process that allows anyone with a telephone and a television screen to see the day's weather report, stock quotations, rail and airline schedules, horoscopes, and even a series of electronic games for the cost of a long-distance phone call. Home security, fire and emergency alarms, and public-opinion polling are already the subject of experimentation in the rapidly growing field of video and video-related services.

It is against this backdrop that electronic games have captured the American imagination. Our suspicion of computers is being quickly and efficiently allayed. Children now routinely spend a large part of their playtime with computers. Some manufacturers are starting special electronic product lines for very young children, hoping to further capitalize upon a somewhat unexploited segment of the market.

Electronic games, thus far, have been extremely popular with adults and older children. According to *Leisure Time Electronics* (May/June 1980), the majority of games are sold to larger, "upscale" families. Mattel has started a line of adult-oriented items with its *Horseshoe Analyzer* (page 70) and *Computer Gin* (page 116). This commitment has encouraged many department stores to move these electronic devices from the "toy" department into a new "electronics" department. Hand-held games have created an entirely new way to spend leisure time, and the retail sales of these items attest to their fantastic hold on the American consciousness. And yet we've seen only the germinal developments in this industry, with predictions of more sophisticated displays, more versatile controls, and more complex game strategies bound to come true in the next two to three years.

The most sophisticated games available today are video games, available in cartridges that fit into large master computer units. These game systems, considered by some retailers to be the first step toward computers-in-every-home, have been selling alongside the electronic hand-helds for several years. Video computer games are described in detail in Chapter Six.

Ever since our first calculators, we've learned to accept computers around the house. We travel with their words, are learning to compute taxes with their automated accounting programs, and now wear them on our wrists wherever we go. Electronic games are one of the most obvious effects of the revolution, no doubt leading the way for far more sophisticated special-purpose miniature computers in the next five years or so.

CHAPTER 1

Sports Games

The makers of electronic toys and games have long known the secret to success—adaptations of football, basketball, and baseball are the consistent champs. And they're played by everyone—from armchair quarterbacks to small children.

Perhaps the most interesting characteristic of all the games in this chapter is that they have little, if any, relationship to the rules and the spirit of the actual sports they portray. For example, football, most often played with dashing red blips, is almost always a running game in its electronic rendition. Passing is little more than a second thought. Each game follows some of the mechanical rules of its sport, but it is the rare game that succeeds in really simulating the essence of a cleverly executed strategy play.

Still, many of the games in this chapter are a lot of fun to play. Chasing your way through a field of red blip defensemen is a real challenge, especially if you are agile enough to develop some skill in play. And the more you practice, the better you will play. I've tried to indicate those games that encourage the development of fast-fingered agility, and those whose action is purely the random flashing of a computer.

Coleco

ELECTRONIC QUARTERBACK™



Product of Coleco Industries, Inc.

One of the most successful electronic games on the market is ELECTRONIC QUARTERBACK, an offense-only simulation of football. Players are represented by tiny red blips, with the dimmer group of six blips playing defense, two brighter blips as offensive guards, and 1 blinking blip as the ball-carrying quarterback. All players travel toward an indicated goal through a series of four invisible "lanes." The quarterback (or ball-carrying pass receiver) is maneuvered with three buttons: *up*, *down*, and *forward*). He avoids oncoming defensemen by shifting lanes while running toward the goal. The size of the playing field is a little small for all of this action, but once you learn how to maneuver your quarterback blip, you'll quickly master the game's rules.

Each game begins with an automatic kickoff whose yardage is randomly determined by computer; the first line of scrimmage is also set at a random yardline. Now that the ball is in place, you start the play by pressing one of the directional arrows. Your quarterback (the flashing blip) is guarded by two offensive linemen who will try to clear the path to the goal. As you start the run, the linemen are usually tackled almost instantly, leaving you, as ball-carrying quarterback, to do some fast-fingered maneuvering to avoid tackle.

Second down, 8 yards to go for a new first down, on your own 20-yard line. You may either pass or run. You decide to pass, so you press the arrow buttons to maneuver one of your teammates into passing range, and press another button to pass the ball. If the pass is successful, the receiver can now maneuver by the arrow buttons until tackled. Passes may be intercepted—if a computer-controlled defenseman pops into the ball path, the competition takes possession.

After each play, two displays are shown: first, the down, yards to go, and the field position; then the home and visitor scores, and the time remaining in the quarter. Each game consists of four quarters, each of fifteen abbreviated ("simulated") minutes.

There are two skill levels on ELECTRONIC QUARTERBACK, each affecting overall game speed. The game is really designed for two players, each one playing the offensive team in turn (one is scored as visitor, the other as home), but you can play alone. The computer always defends.

MANUFACTURER: Coleco, Hartford, Connecticut

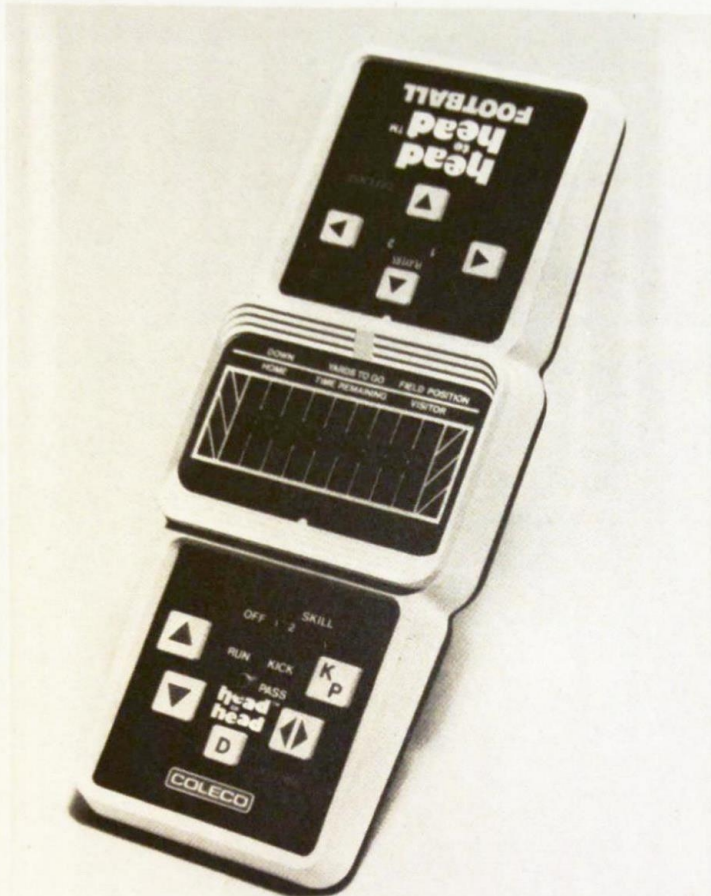
PRICE: About \$30

POWER REQUIREMENTS: One 9-volt battery, no AC adapter available

RATING: * * * ½

RECOMMENDATION: Once an innovation, this football game is now one of the simpler ones on the market. It seems to appeal more to children than to adults. Serious fans will require more options, and will find more complicated football games in the reviews that follow.

Coleco

HEAD-TO-HEAD™ FOOTBALL

Product of Coleco Industries, Inc.

A somewhat improved version of ELECTRONIC QUARTERBACK, this game allows two competitors actually to face each other while peering at an enlarged playing field. The offensive controls are virtually identical to those on ELECTRONIC QUARTERBACK. The defensive controls (four arrow buttons pointing up, down, right, and left) allow a second player to control manually one of six defensive players, while the computer moves the other five men on the team. The ELECTRONIC QUARTERBACK scheme—with four lanes, nine yards shown on the field (and the ability to see additional field portions as a runner leaves the original field of view and enters another), run and pass options, interceptions, and length of game—is repeated here.

As in real football, a turnover occurs after four downs or interceptions: the game console is turned around so that the "home" player, formerly the defense, now sits behind the offensive controls, and vice versa.

HEAD-TO-HEAD FOOTBALL can be played by one offensive player (the defensive controls are never used in solo play, so the game becomes a near duplicate ELECTRONIC QUARTERBACK), or by two, as described above. There are two skill levels, both affecting the speed of the player movement.

MANUFACTURER: Coleco, Hartford, Connecticut

PRICE: About \$40

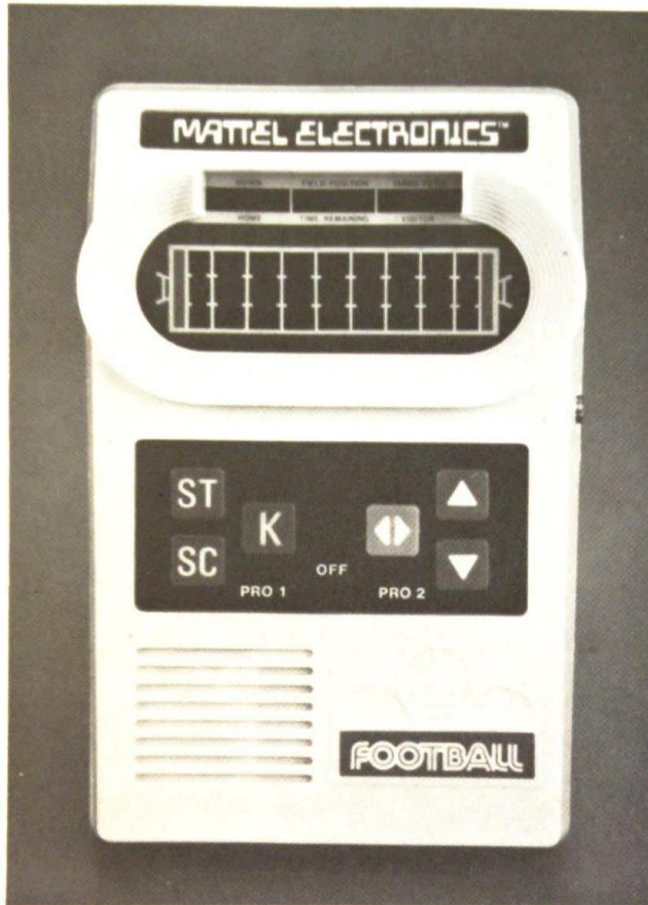
POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: * * * 1/2

RECOMMENDATION: A good competitive game of football, with some minor drawbacks. The position of the arrowed buttons, for example, is inconvenient: most players occasionally hit the *display* button at decisive moments, because it sits where a directional button should be. This is true of all HEAD-TO-HEAD games.

Mattel Electronics®

FOOTBALL



© 1980, Mattel, Inc., Hawthorne, California

FOOTBALL is so obviously the precursor to FOOTBALL II that it is difficult to judge it on its own. Improvements were all too necessary, and thus, it is hard to take this unit to heart once you've experienced the update.

FOOTBALL is played on a small field with a single controllable offensive man whose sole function is to gain yards by running through the formations of tackles. The quarterback cannot run away from the goal here, and this, coupled with limited offensive options, makes this a fairly dull game.

The format here involves four short quarters, with a constantly visible countdown clock, and first downs offered after gains of ten yards. A *status* button displays the down, field position, and yards to go; a *score* button

shows home and visitor scores, as well as the time remaining in the quarter. A *kick* button is used to punt and attempt field goals; it is also used to begin each quarter of the game.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$25–\$30

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: • • ½

RECOMMENDATION: This is a comparatively simple running game with a well-designed format. Most players select the more sophisticated FOOTBALL II—the slight difference in price seems worth the money.

*Mattel Electronics®***FOOTBALL 2**



© 1980, Mattel, Inc., Hawthorne, California

Mattel's latest version of America's favorite field sport is the best electronic football game available. While there are a very limited number of play elements actually involved in this adaptation—there is no player control of defense, for example—the running blips capture the quarterback's pugnacious style unlike other football games.

As fans will see, MATTEL FOOTBALL II is very much a running game, with a virtual "one-man team" quarterback dodging defensemen as he tries to run downfield in nearly every play. Though he can pass, the chancy nature of the receivers' action, and the distinct possibility of interceptions, make the

running game the most certain in this stadium. Running is accomplished as you press one of four directional buttons—and you must move very quickly, because the defensive openings don't last more than an instant. Most handheld quarterbacks will find their gains far more assured by trying to dodge the defense in a manner not unlike the action of Mattel's AUTO RACE game (see page 176).

FOOTBALL II is played in four quarters, each of 15 “simulated” minutes (the quarters actually run under 3 minutes). Each quarter begins with a kickoff, generally resulting in an offensive run and eventually a tackle. The four downs then begin, each initiated by touching the *status* button and any directional button. A ten-yard gain always results in a new first down, and if you're good at the game, you can force a good run often enough to feel like a winner. A touchdown is greeted with enormous fanfare as the runner (or, less frequently, the pass receiver) crosses the goal line. Players can attempt field goals as well.

A scoreboard, located just above the playing field, shows either down, field position, and yards to go for first down, which is displayed on the touch of the *status* button, or home score, time remaining in the quarter, and visitor score, displayed when the *score* button is pressed.

One final note—you'll probably be confused at first by the comparatively small playfield, and the seemingly random groups of blips. Read the instructions carefully, try pressing the various buttons, and you'll pick up the pace. The fact that nine yards are shown, and that a player may run off the screen on the right only to reappear on the left (or vice versa) will be a bit strange at first, but, again, practice will make these design features perfectly acceptable to most players.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING ★ ★ ★ ★

RECOMMENDATION: Minimal knowledge of football's rules would be helpful for starting players. This is a good game, easily enjoyed by anyone, regardless of his or her love for football.

*Bambino™***SUPERSTAR™ FOOTBALL**

SUPERSTAR FOOTBALL is similar to the others in that a blip (in this case, a very carefully drawn fluorescent top-view of a football player, rather than a tiny red dash) is maneuvered through three lanes, dodging tackles and gaining yardage as he goes. All movement is controlled by three buttons: *up*, *down*, and *toward the goal*. You'll find that if you grip the game with two hands, thumbs up, you can use your thumbs with one finger on the button, the other shifting back and forth between the up and down controls. Very efficient; a superior design.

Unique features here include a choice of three offensive plays (*A* shifts one tackle into a path directly in front of the quarterback, *B* shifts both tackles into this running lane, and *C* shifts in precisely the opposite of *A*'s play), and a *pass* option. The *pass* essentially turns the whole game over to the computer's random action (you lose control of the game, and merely watch). The *kick* and *punt* (both the same button) options are also computer controlled.

The most exciting action here is in the running game. A skillful, practiced

runner can do well in gaining yardage, but a fairly high random factor really limits even the best players.

After each play, SUPERSTAR FOOTBALL displays a cycle of status and score information (down/yards to go, field position, home/visitor scores, and time remaining/quarter) in place of the players on the field. Since this interrupts the play flow, Mattel's above-the-field scoreboard is a better design.

SUPERSTAR FOOTBALL's spectacular physical design promises a good deal more than it delivers. Other than having the biggest playing field on the market, the game itself is slightly less intriguing than its competitors.

MANUFACTURER: Bambino, Los Angeles, California

PRICE: \$50-\$60

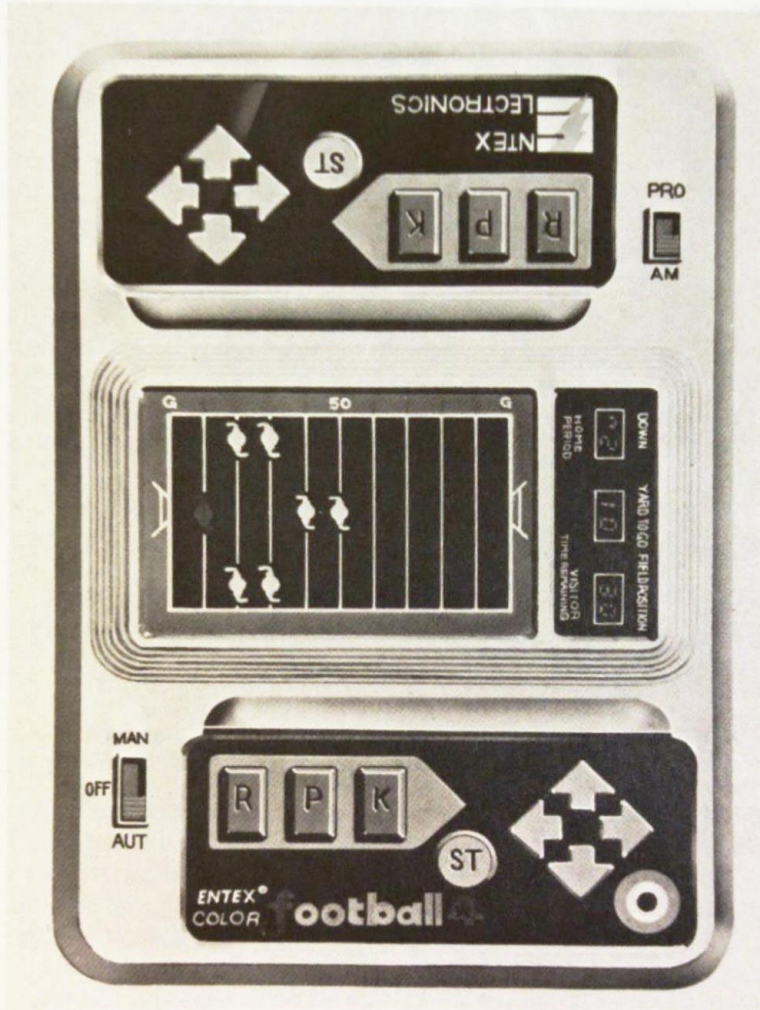
POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING: * * *

RECOMMENDATION: This is a good, flashy electronic football game, devoted primarily to running. Other games offer more control, but less clarity of play. The control options, particularly an effective pass play, were more interesting to our test group.

Entex®

COLOR FOOTBALL 4



COLOR FOOTBALL 4 is played by two teams of specially drawn players who gain yardage by maneuvering through five "lanes" that run the length of the gridiron. There are four directional buttons for the control of all such maneuvers, with the quarterback moved by the human player in command. The defensive team includes three men, arranged with two computer-controlled tackles and one additional tackle, operated either by the computer (single-

player mode) or by a second human player who controls them by using a second set of four directional buttons.

The running game here is like all the rest—a matter of watching the field carefully and simply avoiding contact for as long as possible while “running” toward the goal. A unique “equalizing feature” allows the computer occasionally to take over offensive control. It can be eliminated by switching from *auto* to *manual* mode, and by pressing various combinations of directional arrows as per the game’s printed instructions.

The passing here allows would-be quarterbacks to throw short, medium, or long passes. This is purely a matter of instinctive timing—the moment at which you press the appropriate button will help the computer decide, at random, upon the success of your pass.

A kick starts the first and second halves. There is also a field goal feature. The results of field goal kicks are determined, again, at random, with the odds at their best when the line of scrimmage is nearest to the goal line.

A side-of-field scoreboard flashes the usual down/yards to go, quarter/time, and home/visitor scores. The actual field is scrolled 10 yards at a time, with a handy electronic readout indicating line of scrimmage. Games are played in four quarters, each fifteen “simulated” minutes long.

MANUFACTURER: Entex, Compton, California

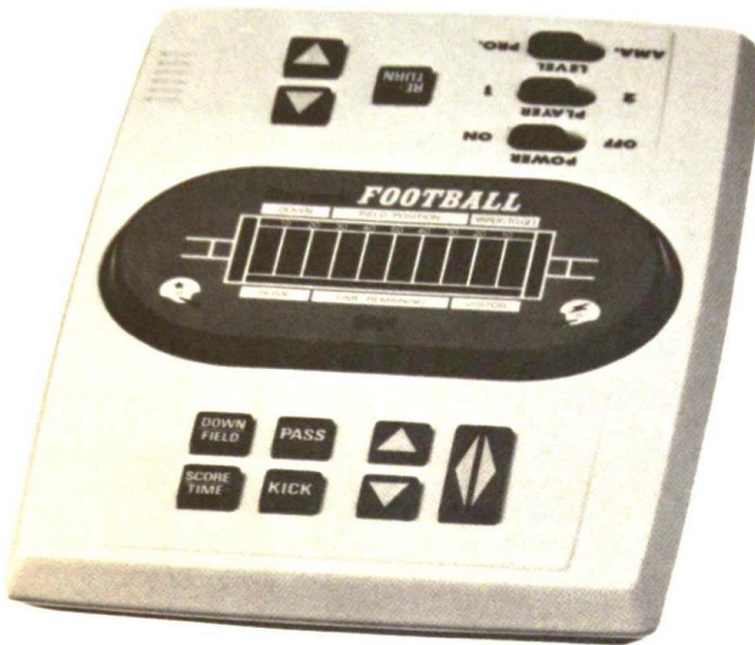
PRICE: Under \$40

POWER REQUIREMENTS: Three “AA” batteries, or AC adapter

RATING: * * * 1/2

RECOMMENDATION: This is one of the better football games available. It improves upon Entex’s Football 3, usually found at about the same price.

*Epoch***ELECTRONIC FOOTBALL**



Clarity of display is one of the best features of this football game, another in a competitive field of running/passing football simulations. As elsewhere, the blip with the ball (these blips are fluorescent, and the man with the ball is very clearly indicated) dodges the defensemen in a three-track version of 10-yard segments of the gridiron. The running keys, allowing movement up, down, and toward the goal, are limited in that they do not allow much tactical running (once you've run toward the goal and found your path blocked, you've nothing to do but wait to be tackled—you cannot run back toward your own goal to develop a revised plan). A pass option exists, unique in that its use clears all but one defensive player from the field, and in that the running (arrow) buttons are used to control the position of the pass receiver after the ball is thrown. The game literally spotlights each passing play, temporarily eliminating all other action on the field. For one player (computer defends), or two players in head-to-head fashion. With two skill levels, affecting speed.

MANUFACTURER: Epoch, Englewood, New Jersey

PRICE: \$35-\$40

POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING: * * *

RECOMMENDATION: A reasonably solid simulation, with a few truly inspired plays possible. Better for kids than for hard-boiled football fanatics. (Incidentally, this game is *very* hard to play at a table, because the plastic field overlay sits above the electronic gridiron. Play it on the floor.)

*Bambino*TM

FOOTBALL CLASSICTM

This is Bambino's SUPERSTAR FOOTBALL with one significant improvement: the ball is red; the offense and defense are blue and green. The colors are helpful in indicating who's who on the field, since the basic player patterns are similar for offense and defense (one's an outline, the other is a solid, and it's easy to get confused when you're playing quickly). Except for the colors, it's the same game as SUPERSTAR FOOTBALL.

MANUFACTURER: Bambino, Los Angeles, California

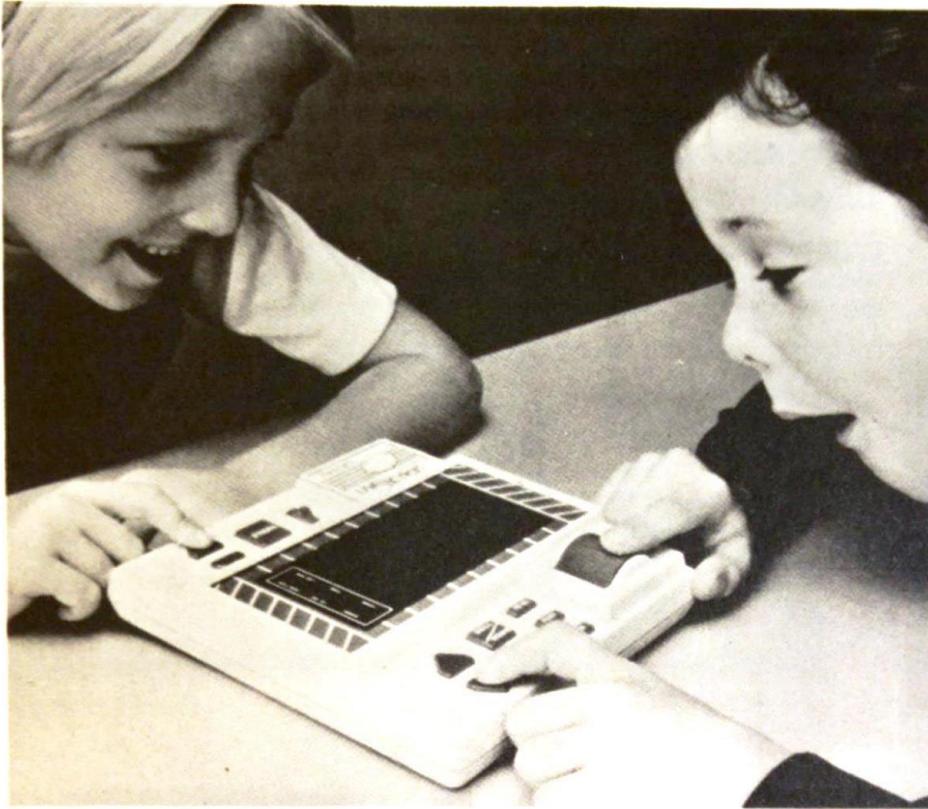
PRICE: \$50-\$60

POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING: * * * 1/2

RECOMMENDATION: If the price is right, buy this version for the color. Remember, this is the *same game* as Bambino SUPERSTAR FOOTBALL, with a three-color display.

*Kenner Electronics™***LIVE ACTION™ FOOTBALL**



Kenner has taken a thoroughly radical approach to electronic football—rather than blips, the football players are represented by, well, football players. The display is large and clear, with a cartoon drawing of the quarterback moving toward a goal post. The quarterback runs on the left side of the screen within a perspective drawing, and spots tackles along the way. Running is accomplished by spinning a knurled wheel as fast as you wish to run; yardlines pass beneath the feet of the runner to show the action of the game. The game plays a full 100 yards, with a goal post in sight for the final yards, prior to touch-down.

Animated characters are the gimmick here, but the game itself is hardly gimmicky. This is head-to-head action as exciting as any on the market. A scoreboard—located to the side of the playboard—displays downs, yards to go, line of scrimmage, time remaining, home and visitor scores. The offen-

sive controls include pass, punt, and field goal, alongside two directional buttons. Defense can control a single tackle with two directional buttons. The game also plays our national anthem.

MANUFACTURER: Kenner, Cincinnati, Ohio

PRICE: About \$50

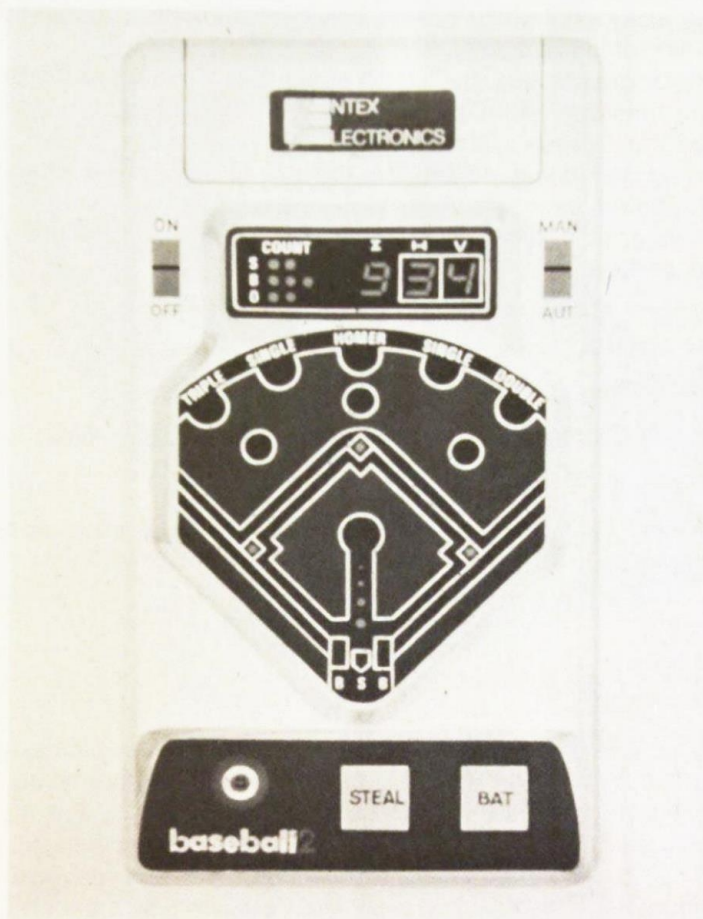
POWER REQUIREMENTS: Six "AA" batteries

RATING: * * * *

RECOMMENDATIONS: Particularly good for children, this highly graphic adaptation is a welcome relief from the blips. The game is a good one, every bit as competitive and spirited as the other games in this category.

Entex®

BASEBALL 2



Entex makes three baseball games, each with its own set of play options. BASEBALL 1 is a mechanical game with some electronic gimmickry. BASEBALL 2 and BASEBALL 3 vary only in the increased number and elegance of their options. All three games have been very popular as basic reproductions of America's favorite sport. (BASEBALL 3 is reviewed separately.)

In BASEBALL 2, the pitcher has a choice of five different pitches—fast ball, change-up, curve, and slider (and knuckle ball option that can be used in mid-pitch, to change ball course for any pitch except a fast ball). As the ball blips its way from the pitcher's mound to one of several possible courses, the batter stands ready, and tries to time his button-press to coincide with the

instant the ball crosses the strike zone. If he is successful, the blip starts racing around the infield and outfield at random, through thirteen possible field positions, five of which are scored as hits (all others are outs). When a player is lucky enough to get on base, his running is controlled by the random action of the computer.

A counter scores strikes, balls, and outs in each inning, and a single digit records the runs scored. In order to change sides during the course of an inning, one must press a button. After both teams have played, however, there is no second inning in BASEBALL 2, no accumulated runs carried over on the scoreboard. Inning-by-inning scoring must be done on paper.

Two levels of play, *professional* and *amateur*, are available. For play by one or two, preferably children.

MANUFACTURER: Entex, Compton, California

PRICE: Under \$40

POWER REQUIREMENTS: Three "AA" batteries, or AC adapter

RATING: * * *

RECOMMENDATION: The random action by which all plays are determined makes this rather like roulette or another game of chance.

Entex®

BASEBALL 3



Entex improves upon its previous attempts at baseball adaptation with **BASEBALL 3**, which is similar to **BASEBALL 2**, with a gamut of new features. **BASEBALL 3** is played in the same way as its predecessor, with a hit ball randomly lighting field positions until the computer picks the chance result. In this version, however, the human players have more control than before.

On the offense side, previously just a *bat* button, there's a bunt and a steal option. And the computer has been programmed to react as a right-handed batter might (e.g., a late swing will pull the ball to right field). You'll find that the steal option gives you the greatest sense of the sport, as every steal attempted can be greeted with a throw from the pitcher—if he's fast enough.

A full nine-inning scoreboard, a remote-control pitching console, and an "at bat" indicator complete the package. As before, there are two skill levels, each one controlling the speed of the game. For play by one or two players.

MANUFACTURER: Entex, Compton, California

PRICE: Under \$40

POWER REQUIREMENTS: Three "AA" batteries, or AC adapter

RATING: * * * 1/2

RECOMMENDATION: This is still a far cry from the real game of baseball, but the new options make play far more enjoyable than before.

Mattel

BASEBALL



© 1980, Mattel, Inc., Hawthorne, California

Mattel's adaptation of **BASEBALL** is quite simply one of the most addictive electronic games available today. By capturing the spirit of the sport and its inherent strategy, Mattel has created what amounts to a whole new game, based on the tensions so familiar in the game of baseball.

BASEBALL is played on a simplified baseball diamond, whose key positions include batter's box (with zones for strikes and balls), pitcher's mound, three bases (and two lights between them, serving as baseline guides for the runners), and only five field positions (LF, CF, RF, "deep first," and "deep third"). Two buttons are used by the offense to control the game's action—*hit* and *run*.

Press *pitch* to start play, and the computerized pitcher throws one of five randomly selected pitches. You'll find that it doesn't matter which pitch comes when, because the batting game, as in real baseball, is a matter of swinging when the timing feels right. To swing, press *hit* at the instant just before the ball enters your zone. Swings and called strikes are greeted with an "eep" sound

and a strike on the scoreboard. A fly to any of the five field positions, or to the pitcher's mound, is indicated by a descending tone and the flashing of the fielder who caught the ball. If your timing is good, you will probably hit the ball once every three or four times at bat. A hit registers as a steady light at the location to which the ball traveled, and either one, two, or three beeps. It is here that Mattel's BASEBALL surpasses all competitors. You've now seen where the ball landed, and you have now heard the computer's estimate of the value of your hit. Press *run*, and your blip will head toward first base. If you heard only one beep, and the ball landed on the first base side, it is probably best to stop running at first base. If the ball landed in left field, however, you might want to try to stretch that single into a double, particularly if your runner is a fast one (the computer varies running speed from player to player at random). Let's stay on first base (first base remains lit). The next hit might be driven to right field, and the computer might beep not once, but twice. Start running *immediately* (lost time will only increase the likelihood of the ball reaching the base before you do), and your man on first reaches third just as you reach second base. The next time you score a hit, even a single, a man will score (runners always move at the same pace—each man advances the same number of bases each turn). Each run is greeted with a simple set of two beeps—but runs are as hard to find here as they are in major league baseball. It is rare that five-inning scores (all games last five innings) total more than three or four runs per side.

The key to this game's fascination is the way it has been programmed—the time frames allowed to stretch singles into doubles, the wait for the pitcher's delivery (there is a 1.5-to-2.5-second delay between the time you touch the *pitch* button and the time that you actually see the pitch, the better to catch the batter off guard—just like in real baseball). And sometimes a promising hit will result in a very fast fielding play, causing even the most hopeful triple to become barely more than a double. A scoreboard logs all action.

Mattel is certainly capable of further enhancing BASEBALL with options to steal bases, to choose pitches or fielding plays (as in a "fielder's choice"). It is unlikely, however, that any of these changes will really affect the spirit of Mattel BASEBALL, for it is a game that even the most critical of sports fans is bound to enjoy.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: ★ ★ ★ ★ ★

RECOMMENDATION: For all ages, for anyone who loves baseball, and for anyone who loves a good game of any description.

Coleco

HEAD-TO-HEAD™ BASEBALL

Product of Coleco Industries, Inc.

There are those who will say that Coleco makes the best electronic baseball game on the market. Coleco has made a commitment to a high degree of realism, promising the equivalent of grand-slam home runs. For each homer, unfortunately, there is a ground out as well.

Analogies aside, Coleco's HEAD-TO-HEAD BASEBALL is both a batter's game and a pitcher's game. Each player makes definitive decisions that directly affect the game's outcome. Let's take the pitcher first. The human pitcher controls two buttons—*fast pitch* or *curve ball*. A "curve" cannot result in a hit according to this game's rules, and a batter who swings at a curve will always score a strike. A "fast pitch" will arbitrarily be either a "curve ball" (decided by computer) or a "straight ball," but a "slider" (thrown by pressing *fast* and *curve* simultaneously) will always be a fast curve ball. Because batters cannot hit curve balls, the use of this pitch can result in lots of balls if the batter is aware, and lots of strikes if the batter is a sucker.

Fast pitches result in a higher percentage of balls, but have no apparent

affect on the batting strategy. Slow pitches delivered when the fast button is not pressed are more likely to float across the strike zone.

A good pitcher will factor all of this information into his defensive strategy. The game becomes a play of poker faces between batter and pitcher, a matter of remarkably little importance in the actual sport of baseball.

The hitter is also faced with an array of special strategy features. Before each new batter enters the box, we see his batting average, which is an expression of this particular batter's odds of making a hit. A *power* option key increases the likelihood of a long ball hit (double, triple, homer), but shaves fifty points off the batting average. This is a far more realistic strategem.

A *bunt* key can be used to chance sacrifice outs, moving the lead runners in exchange for a tag at first base. The *steal* option, when properly used, will allow the lead runner to steal a base, tag up, or go for extra bases on a safe hit. A series of ballpark ground rules should be read, relating to these and other situations.

The scoreboard shows runs scored, batting averages (which serve only the player at bat and do not reappear as we go through the lineup), outcomes of hits and computer-controlled fielding plays, and team at bat.

With two speeds.

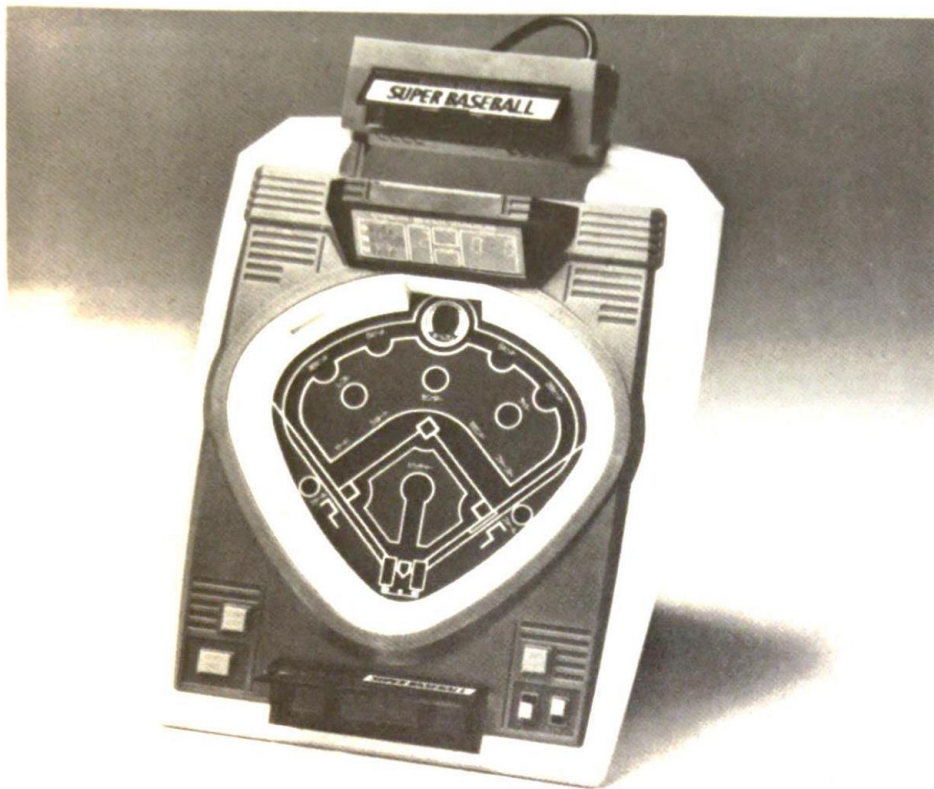
MANUFACTURER: Coleco, Hartford, Connecticut

PRICE: \$40-\$50

POWER REQUIREMENTS: Two 9-volt batteries

RATING:

RECOMMENDATION: Very heavy on the strategy, but few tested truly felt that they were playing much more than a game of pitch-and-bat. Running and fielding opportunities would have made this more fun. It is, however, one of the better baseball games around.

*Bandai Electronics™***SUPER BASEBALL**

Fancy displays (in three colors), a removable "remote control" pitching console, and a sophisticated scoreboard make SUPER BASEBALL an enticing game. The play functions are nothing unusual—the pitcher can throw either one of two curves (inside or outside), a straight pitch, or a change-up, and the batter can either bat or bunt. Getting hits, in our product testing, was more difficult here than in any other baseball; in fact, just getting a piece of the ball before the computer called a ball or a strike was a real challenge. Hits are randomly determined by computer.

If you are lucky enough to get on base, there is a "steal" option. Press *steal* after the pitcher releases the ball, and hope that the pitcher does not press *steal out* before the steal is completed—easily done if you're quick (but a foolish risk because it's so hard to get a runner on base in the first place).

The lack of clarity as to precisely *what* occurred on the third out, combined

with a computer ump who is "blind" (he calls balls as strikes, and strikes as balls, seemingly at whim) is frustrating. Novice players may also find the bright orange-on-orange buttons difficult to read (the control words are etched into the plastic, so they're nearly invisible).

MANUFACTURER: Bandai, Secaucus, New Jersey

PRICE: \$25-\$35

POWER REQUIREMENTS: Four "AA" batteries

RATING: **

RECOMMENDATION: Flashy, but not much substance. There are other games that offer more intriguing competition, and more realistic renditions of the sport.

*Bandai Electronics™***MIRACLE BASEBALL**

A very large (3" x 4") liquid crystal baseball field, along with a clean, crisp, metallic design, makes this game *look* outstanding. Further inspection will reveal a great similarity to Bandai's SUPER BASEBALL, particularly in the player control devices. You'll find that an ability to move outfielders to the left or to the right increases defensive control—a feature that was sorely lacking in the other game. Most of the important action, aside from pitching, remains random.

With removable "remote control" pitching control.

MANUFACTURER: Bandai, Secaucus, New Jersey

PRICE: \$50–\$60

POWER REQUIREMENTS: Two "AA" batteries

RATING: * * ½

RECOMMENDATIONS: Aesthetically pleasing, but the game is not as distinctive as the design promises.

*Epoch***DIGIT-COM 9**

The most interesting feature in Epoch's random-result baseball game is pitching—by touching various combinations of curve, fast ball, change-up, slow ball, and so on, electronic pitchers can serve up to twelve different tosses to unsuspecting batters at the plate. Unfortunately, this inspired style is carried no farther than the pitcher's mound, since the only other controls on DIGIT-COM 9 are *bat* and *bunt* options. Timing is the key to hitting successfully, but even the most solid connection cannot guarantee a batter's success. Batting results are always determined at random by computer, and shown on the various field positions. Use of the *bunt* button is limited to sacrifice plays, according to game rules.

This is a game for one or two players; in the single-player game, the computer always pitches (but the human player must still depress the *defense* button on each potential hit. No skill levels.

MANUFACTURER: Epoch, Englewood, New Jersey

PRICE: \$25-\$30

RATING: *

POWER REQUIREMENTS: Four "AA" batteries

RECOMMENDATION: For pitching fanatics only; others may find more realistic games in competitive products.

*Mego Electronics®***PULSONIC™ BASEBALL II**

This is not one of the stronger baseball adaptations on the market, so much of the game is based on pure chance. The game can be played either in the single player-versus-computer mode (*auto*), or in a human human mode (*manual*), and it seems to play a bit better in the latter. Play is simple enough: the pitcher selects one of five pitches (in, outside curve, fast ball, slow ball, change-up) and presses the appropriate button from behind a small shield located just beyond the centerfielders. A red light trails from the pitcher's mound, following the pitch instructions, and the batter attempts to swing at the right instant by pressing a large *bat* button located just behind home plate. If, by chance, the batter hits, no fewer than fifteen assorted field positions light up in random spots. Five positions are labeled as hits (two singles, a double, a triple, and a run), and the others are outs listed by the positions of the fielders. The lamps complete the array. Running from base to base is completely a computer function.

Special features include a steal function, to be used to advance a first-base runner to second base (but only if you have a man on third, as well as first, to begin with), and a limited double-play feature. A single-digit readout shows the number of runs scored by the offensive team in each inning; a *change sides* button is used to end each half inning.

MANUFACTURER: Mego, New York, New York

PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery; no adapter jack provided

RATING: * 1/2

RECOMMENDATION: There isn't much player control here. Manufacturer suggests an age range of six to adult. Best for smaller kids.

*Micro Electronics/LJN***BASEBALL**

This game of baseball doesn't just provide electronic batters and pitchers—it features an entire stadium. BASEBALL is one of the largest electronic games available, most impressive in its physical stature but nearly devoid of realistic sports action.

Four buttons—two offensive and two defensive—control the play of the game. Defense can do nothing but throw a single pitch; there is no such thing as fast balls, slow balls, change-ups, or curves here. In fact, the only option to be played by the defensive team is to replace a “tired” pitcher (one who has given up too many hits) with a relief pitcher, whom the computer has programmed to perform with greater accuracy with the first six men he faces. In one game, each team can replace the pitcher with a reliever two times.

The offense has little more control over its destiny. One hits by pressing *bat* to stop a random display of possible situations, including outs, walks, singles, doubles, triples, SF's (presumably sacrifice flies—nowhere in the game's rules is this explained), double plays (vexing if it comes up with the first man of the inning), and home runs. As men appear on base, a large baseball diamond illuminates the appropriate bases. Three pinch hitters, each with a higher-than-usual batting average, can be used by the offense to tilt the odds in his favor. Pinch hitters do not always guarantee hits.

A rather impressive, albeit tiny, centerfield scoreboard keeps track of everything from runs scored to relief pitchers remaining in the bullpen. It is here that the fun of the game is centered; the scoreboard is full of electronic jabber.

MANUFACTURER: Micro Electronics /LJN, New York, New York

PRICE: \$30–\$40

POWER REQUIREMENTS: Six “D” cell batteries, no AC adapter

RATING: * * (mostly for design and scoreboard)

RECOMMENDATION: Primarily for children; adults may become frustrated with their inability to control their team's scoring potential.

*Mattel Electronics®***BASKETBALL**



© 1980, Mattel, Inc., Hawthorne, California

Mattel's half-court basketball is one of the best-selling electronic games on the market, and with good reason. It's fast paced, requires short bursts of concentrated attention, and combines instantaneous reactions with simple, straightforward strategies.

Basketball is played on an invisible grid of twenty blips. Five computer-controlled blips race around the screen, always jumping between your shooter and the basket. During 24 simulated seconds, the blip you control can run around the screen by moving in any one of four directions, shooting as many baskets as you can within the allotted time. A missed basket's rebound may, of course, be caught by your opponents if you don't get to the ball before they do. All of this action is very, very fast—so fast, in fact, that you probably won't score many baskets during the first few games you play.

The computer always defends, and the player, whether on the home or the visitor scoreboard, is always the offense. A single player will first be home

and then visitor; two players will pass the game between them after each turnaround.

- Played with two speeds.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: About \$25

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: * * * * *

RECOMMENDATION: Children usually develop a fast, nearly unbeatable playing style. Adults will be devastated unless they practice and practice; (this is one of those elusive games that kids master more naturally than adults).

Mattel Electronics®

BASKETBALL 2

© 1980, Mattel, Inc., Hawthorne, California

The most sophisticated game of basketball on the market depends heavily on the NBA rules. Mattel has maintained the basic play concept used in BASKETBALL, with a fast-moving offense blip attempting to get a clear line to the basket in a half-court game.

Before each play, a defensive plan is entered—either man-on-man, zone, or full-court press. Play is then initiated by touching one of the four directional buttons, and the business of setting up shots—at very fast speed—begins. Defense may commit fouls, which result in foul shots valued at either one or two points, depending upon the computer's random decision.

You may pass in BASKETBALL 2 by spotting your blinking pass receiver in a path unobstructed by defensemen and pressing the *shoot* button. If the pass is successful, the receiver becomes the ball-carrying solid blip, who then moves to set and shoot at the basket.

There is a three-second rule that prohibits an offenseman from loitering in the key.

All baskets are worth two points, but shots taken from beyond the blue line (a semicircle drawn outside the key) are worth three points, as in the NBA rules. Scores are shown on a small readout directly above the basket, with time remaining shown after each turnaround. The game is played in four quarters.

There are four skill levels in BASKETBALL 2.

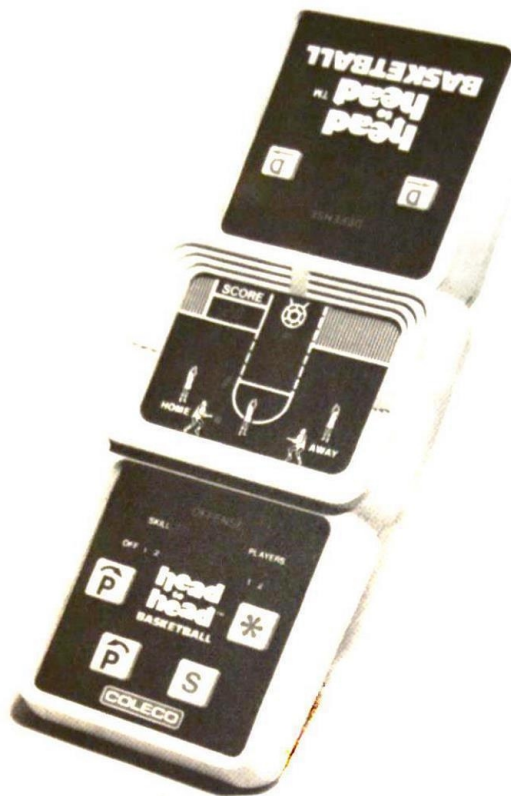
MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: ★ ★ ★ ★ ★

RECOMMENDATION: Even better than BASKETBALL—the new options make a good game even better.

*Coleco***HEAD-TO-HEAD™ BASKETBALL**

Product of Coleco Industries, Inc.

Designed for either one-player or two-player action, HEAD-TO-HEAD BASKETBALL is a game of passing. Like real basketball, this is not simply a matter of shooting baskets; instead, HEAD-TO-HEAD BASKETBALL players become involved in the strategy of setups. There are four court positions on screen, arranged in a semicircle around the key, with a fifth "player" at the foul line. You can pass either clockwise or counterclockwise to the adjacent player, and you can do this relatively quickly. All passing is done to clear a path to the basket, a path unobstructed by the one defenseman who runs from player to player as a block. It's always best to pass the ball around the backfield and eventually to the player at the foul line before shooting, because the odds are best at the line. More adventurous players may take

shots from all over the court, hoping the percentages will come their way. (They usually don't.)

The game really is just that simple—pass the ball around the court until you've got a clear shot, and then *shoot*. Every second counts. It's really a lot like the sport of basketball. (An abbreviated 24-second clock times each play.)

In the one-player game, the computer does a creditable job of defending. In the two-player HEAD-TO-HEAD version, the first player sets up shots, and the second player moves the defenseman in either a left- or a right-hand direction. There are two skill levels, the latter for fast action.

The readouts are clear, and the game is easily followed without eye strain.

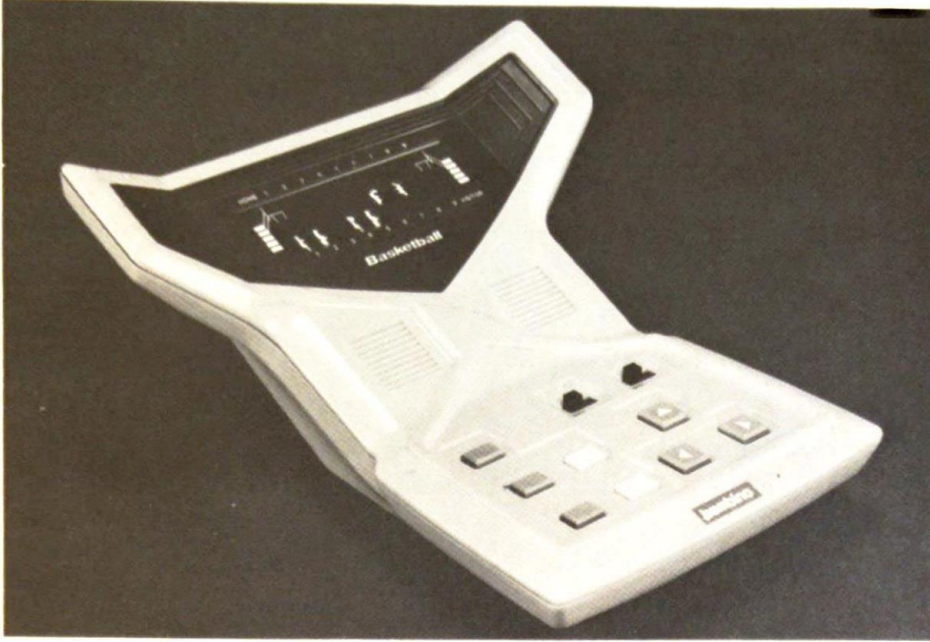
MANUFACTURER: Coleco, Hartford, Connecticut

PRICE: \$40–\$50

POWER REQUIREMENTS: One 9-volt battery

RATING: * * * *

RECOMMENDATION: For all ages, even for those whose fingers are not as lightning-fast as required by the Mattel game.

*Bambino™***BASKETBALL DRIBBLE AWAY™**

Basketball in this game has a perplexing group of play features, some quite excellent, some exasperating. DRIBBLE AWAY is shaped like Bambino's football games, with an angled display screen, so that your thumbs do all the work. In this case, that work is the maneuvering of a single offense player (we see a realistically drawn side-view) either up or down court, with any one of three different dribbles (high, medium, or low). One thumb handles player direction and the *shoot* button, while the other dribbles.

This is an odd adaptation of the game of basketball. There is no court *per se*, but instead a lengthwise display of competitive players who come into and out of play for no apparent reason. Our home player starts the game on the left side of the court. We press *start*, which starts one of the most arcane clocks ever created (it requires the counting of dashes to determine the number of seconds elapsed), and starts the player dribbling. He moves down-court, and some players who appear in his way simply disappear as he runs toward the basket. Some players just stand there, and two beeps follow within a few seconds. Although the instructions do not say so, this is assumed to be either a running block of some sort or an interception. To begin the next play, press *start* again and these actions will be repeated—either the

players will block by standing in the way of the offense man, or they will leave the screen.

I should mention that the offense player shoots when you press *shoot*, and that if he's reasonably close to the basket, the ball usually swishes. If he's farther down court and shoots, the ball may swish anyway. And sometimes one of the stolid fellows leaps into the air and catches the ball, only to stop the play (there is no such thing as continuous action here—every time something happens, the game stops and must be restarted).

There are three skill levels, each of which makes the court a little more crowded with defense men.

MANUFACTURER: Bambino, Los Angeles, California

PRICE: \$50–\$60

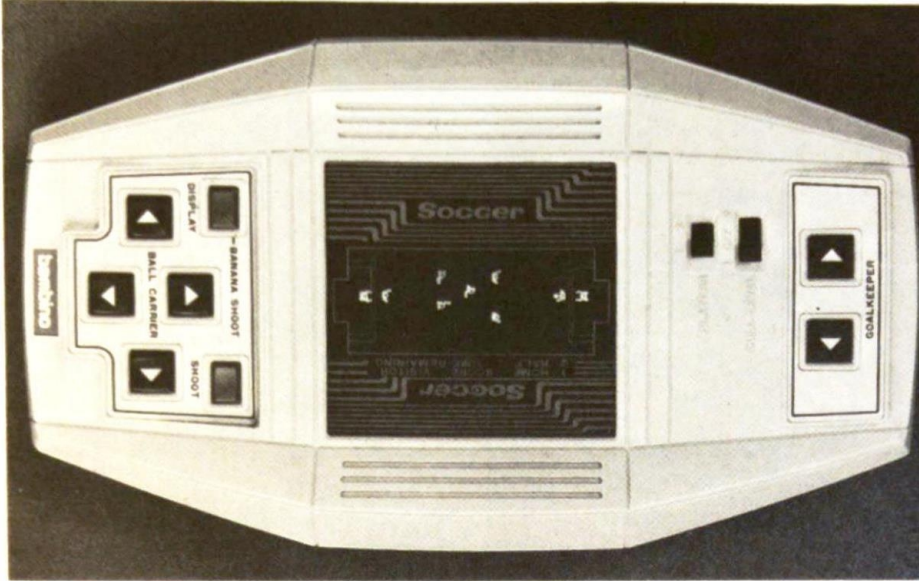
POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING: * ½

RECOMMENDATION: Not as effective as other basketball games.

Bambino™

SOCCER KICK THE GOAL™



For one or two players, this game of soccer is primarily a game of "keep away." Your offensive player races downfield while trying to avoid contact with defensive players. Players are indicated by fairly large representations of the offense, the defense, and the goalkeepers. Shots are taken from any position on the field, with the odds of successful goals increased with proximity to the goal.

Four directional "arrow" buttons are used to control the offense player, and two different shoot buttons are used to score goals. The first, labelled *shoot*, is used for head-on attempts, and the second, *banana shoot*, allows for a bowling-like curve in goal shots. Two displays indicate game progress after each successful and unsuccessful goal attempt: the home and visitor scores, and the time remaining in the half. SOCCER is played in two "45-minute" halves, which last about nine actual minutes each. The game time allowed may be far more than necessary, and chances are you will tire before the half has elapsed.

In two-player action, the defensive player (human) can move his or her goalkeeper back and forth, while the computer continues to control all other defensemen.

Two skill levels affect game speed.

MANUFACTURER: Bambino, Los Angeles, California

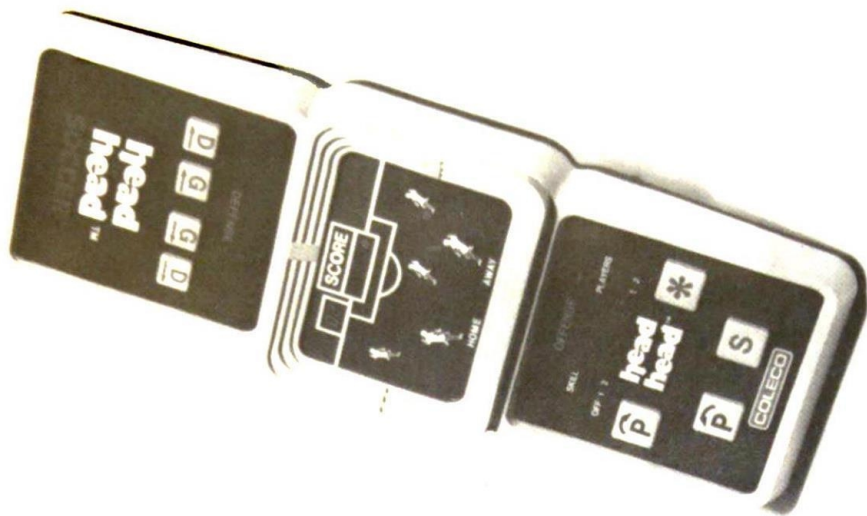
PRICE: \$50-\$60

POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING: * * 1/2

RECOMMENDATION: Plays an adequate game with little variety; best for single-player action (the second player does very little).

Coleco

HEAD-TO-HEAD™ SOCCER

Product of Coleco Industries, Inc.

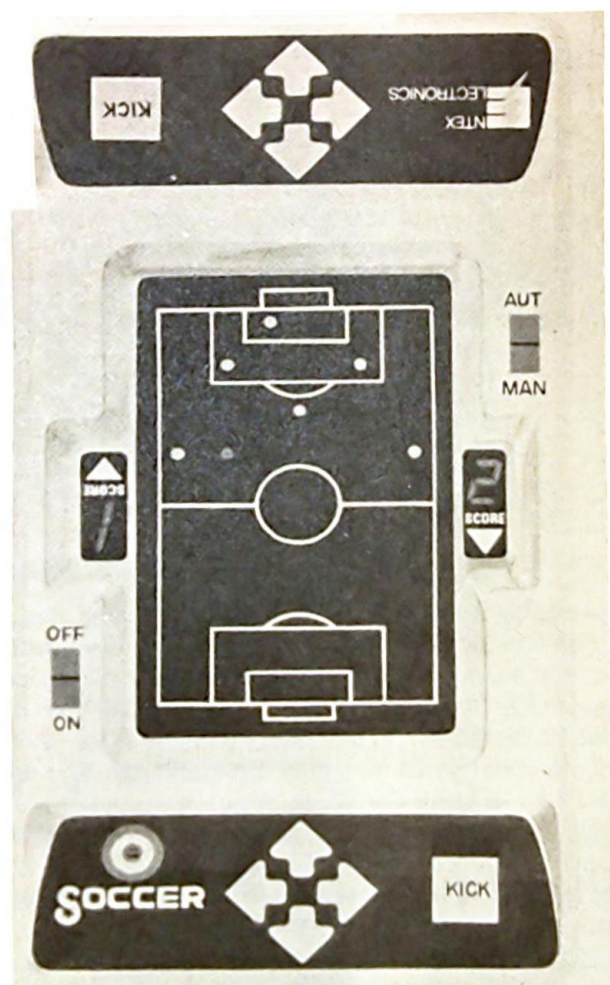
SOCCER in the HEAD-TO-HEAD series is similar in play and format to the BASKETBALL game in the same series (and virtually identical to the HOCKEY). This is, once again, a passing game, where the ball is kicked from one player to the player next to him (either counter-clockwise or clockwise, depending upon the control used). In this game there are five offense players—three are eligible to shoot goals, two play the backfield. The passing action, easily accomplished in BASKETBALL, is frequently blocked in the front line, because of an additional defenseman playing the field as a goalie.

In the single-player version, both defender and goalie are computer-controlled. In two-player action, the human defense must control two blips on the gameboard at the same time. It makes for a fierce battle.

MANUFACTURER: Coleco, Hartford, Connecticut**PRICE:** About \$40**POWER REQUIREMENTS:** One 9-volt battery, no AC adapter**RATING:** ★ ★ ★ ★**RECOMMENDATION:** More fun than BASKETBALL, because of the extra defender. Coleco says that an eight-year-old can handle the action, which may be a bit liberal, but possible with some parental supervision.

Entex®

SOCCER



SOCCER is large, easy-to-learn, and perfect as an introduction to the world of electronic games, especially for children. The game can be played by two people. In the single-player mode, you are an offensive player, trying to weave downfield to score, avoiding three defensive blips and a goalie. The offensive player maneuvers his man with four directional arrow buttons, always avoiding contact with the defense, for contact is ruled an interception of the ball. A separate *kick* button is used when the offense is within scoring position. There is a score indicator at either side of the field. In the two-player version, each human shares control of his team with the computer.

The game plays at an even pace, but other soccer games are faster. Buttons occasionally do not respond—a crucial point where speed and agility are so very important to game play.

MANUFACTURER: Entex, Compton, California

PRICE: \$25–\$30

POWER REQUIREMENTS: Three “AA” batteries, or Entex 4.5 positive adapter

RATING: * * ½

RECOMMENDATION: Game is not as gripping as others in this category, especially for adults.

*Mattel Electronics®***SOCCER**



© 1980, Mattel, Inc., Hawthorne, California

Half-court soccer, Mattel style, is a challenging game. This adaptation is played on a small playing field, with twenty field positions available for your lone offensive player. The opposition defends its goal with a five-man squad and a very active goalie. The idea here is to use your four directional buttons to move your man as quickly as possible, constantly weaving through the defensive zones, which are adeptly moved by the computer. Twelve of the twenty field positions are shown on a diagram in the instructions—when you've maneuvered your man into one of the positions, and you are not blocked by a defensive man—shoot! (if you shoot from any other position, you'll miss the goal). You'll probably find that your ball was either blocked by a defensive player who ran into position after your kick, or blocked by the incredibly fast goalie. Your odds are best if you shoot from a position close to the goal—but don't get too close, because the goalie will leave his post and steal the ball!

This game of soccer is played in two simulated, "45-minute" halves, and is designed for two players to pass the game back and forth to imitate home and visitor possession. The simulated clock allows each player ten game minutes (actually 54 seconds) to score a goal, and renews his clock every time a goal is scored. The "45-minute" halves run just short of four minutes, so a full game of SOCCER should run about eight minutes in actual time.

For even faster play, try the game on level 2 (most novices have a tough time scoring in level 1). This game requires a good deal of practice and patience before much pleasure can be derived. But once you master it, you'll probably love it.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: About \$25

POWER REQUIREMENTS: One 9-volt battery, no AC adapter

RATING: * * * 1/2

RECOMMENDATION: This is a game for the patient and the fast-fingered. (It is similar in appearance and style to Mattel's BASKETBALL, but there are sufficient differences to justify owning both of them.)

*Mattel Electronics®***SOCCER 2**



© 1980, Mattel, Inc., Hawthorne, California

Since Mattel's first soccer game was mainly an electronic goal-shooting device, serious devotees of the sport will be pleased to see a thorough revamping of play format in SOCCER 2. This is an entirely different game, and a far better one at that.

SOCCER 2 is played on a simulated nine-section field, with only one section visible at a time. Downfield motion is, therefore, the first team effort, as the offensive team (two blips, with the active one flashing) fends off the five-man opposition. There are interceptions, caused by inaccurate ball control.

The course of forward motion passes through the nine playing field segments, until you finally arrive in the goal section. (This section is indicated by the appearance of a small red dash just below the scoreboard.) The *shoot* button is used as it would be in most games—first set your ball-carrier in position, and then make the best of the opportunity. And remember to act quickly because the defense can, and will, steal the ball.

A second level of play is available to the proficient; it is activated by simultaneously pressing the score button and adjusting the speed switch. In the advanced game, low or high kicks can be used to pass the ball to your offensive teammate. That teammate, incidentally, may be moved around the field to your best advantage.

SOCCER 2 uses corner kicks (returning the ball to play after it crosses the defensive goal line after last being played by a defenseman), goal kicks (returning the ball to play after a goal is scored), and throw-in (returning the ball to play after it goes out of bounds) to make the action even closer to the real game of soccer.

While certain features of the sport are not reproduced in this hand-held game, most notably the inability of two sides to compete at the same time (the computer always defends, and either the home or the visiting team is offensive, depending on who is actually holding the game), this is the best soccer available. Played with two speed levels.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$30–\$35

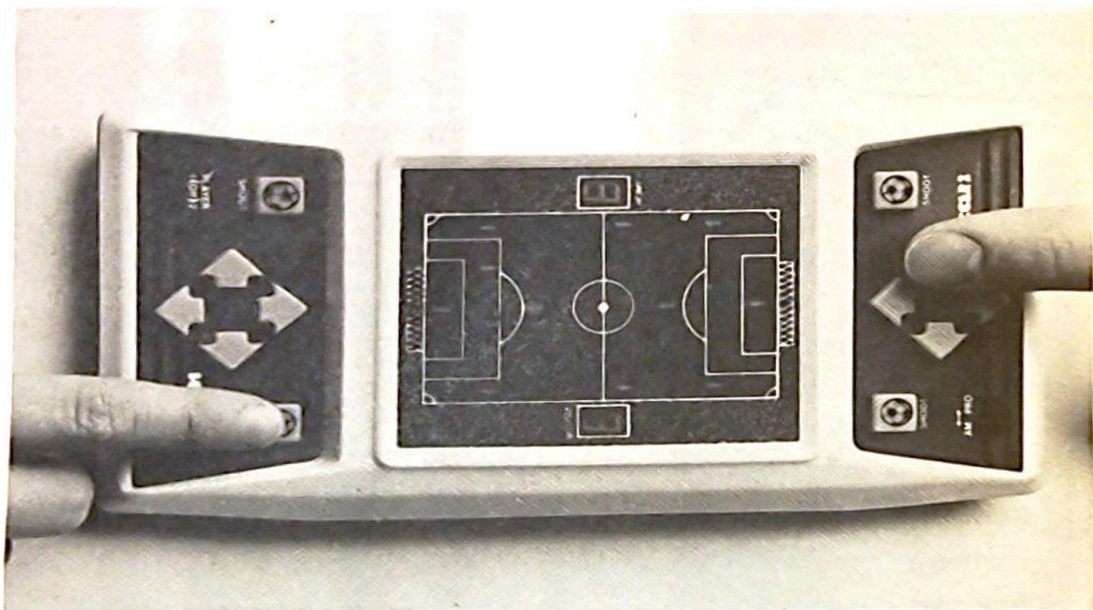
POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: * * * * ½

RECOMMENDATION: Before you fall in love with any head-to-head version, try the action on this machine. It's simply a great game.

Waddington's House of Games

SOCCER 2™



For one or two players, this is a good, basic soccer game, again requiring the maneuvering of blip offense men toward the goal.

The game is played on a field of forty blips (five across, eight up), with twelve team members, six per side, including goalies. In single-player mode, you are in control of one offensive man (the ball-carrier), who weaves through a constantly moving defense pattern toward the goal. The likelihood of interceptions is high, and one must be very fast-fingered on the four-directional buttons. SOCCER 2 allows either head-on or 45-degree goals, so you have some flexibility in shooting for goals. The computer-controlled offensive team members will screen your run.

The only difference in two-player action seems to be the allowance of goalie control on defense (a function carried out by the computer in the single-player mode).

SOCCER 2 is played for two 45-minute halves, which last only a few minutes each in real time. A total of nine goals, if they occur before the "90-minute" time period elapses, will also end the game. Two skill levels, both affecting speed, are available.

MANUFACTURER: House of Games, Elk Grove, Illinois

PRICE: \$25-\$35

POWER REQUIREMENTS: Four "AA" Cells, or AC adapter

RATING: * * *

RECOMMENDATION: A good workhorse action game, particularly for play by two active children.

*Mattel Electronics®***HOCKEY**

© 1980, Mattel, Inc., Hawthorne, California

By far the most challenging of the Mattel half-court sports, HOCKEY has adapted some of the real-life features of the game to enhance the play. Whether played as a solo or duo game, the computer always defends. The human always controls a single offensive man (a blip). You'll notice that there is only one offensive player, and in the best of circumstances, he is the one with the puck (a bright, steady red light). In a good many plays, the offensive player finds himself without the puck, in which cases he twinkles his red blip while skating after the lost puck.

The very fact that puck control is so difficult is indicative of HOCKEY's real sense of competition. As in NHL hockey, there are several different ways to lose your puck. The first is to stay virtually still on the ice—an invitation to the defense for a poke check, a tap on the puck that sends it flying into skids all over the ice. Once you've lost the puck, you race against the opposition to regain possession. If you do regain control, you continue to play. If you don't get there first, the puck is turned over to your opponent.

In the course of maneuvering into a scoring position (seven of the nineteen board positions are scoring positions; when you see one with a clear shot, race for it!), you may (accidentally) bump an opposing player. If the computer spots the action, it's a penalty, and the cause for a turnover. When you hand the game over to your competitor, you'll notice one of the defensive players (*your* team after the turnover) in the penalty box as a result of his action. This means, of course, that your opponent can play against only three defensive players for the next two (simulated) minutes, or until he loses control of the puck.

HOCKEY is played by one human at a time. First I play, and the computer tallies my score in the *visitor* position; then you play as *home*. Three simulated periods, each twenty simulated "minutes" are clocked throughout the game (a single readout continuously flashes a sequence of home/visitor scores and time remaining). The game can be played with two skill levels. This game is very fast, played on a very tight field where penalties and poke checks are the rule only because the rink is so very cramped. Most newcomers find the game difficult to learn. Once you learn the sound codes (double beep for poke, single beep for interception, two whistles for penalty, etc.), it is easier to understand, but the game still requires lots of attention and patience.

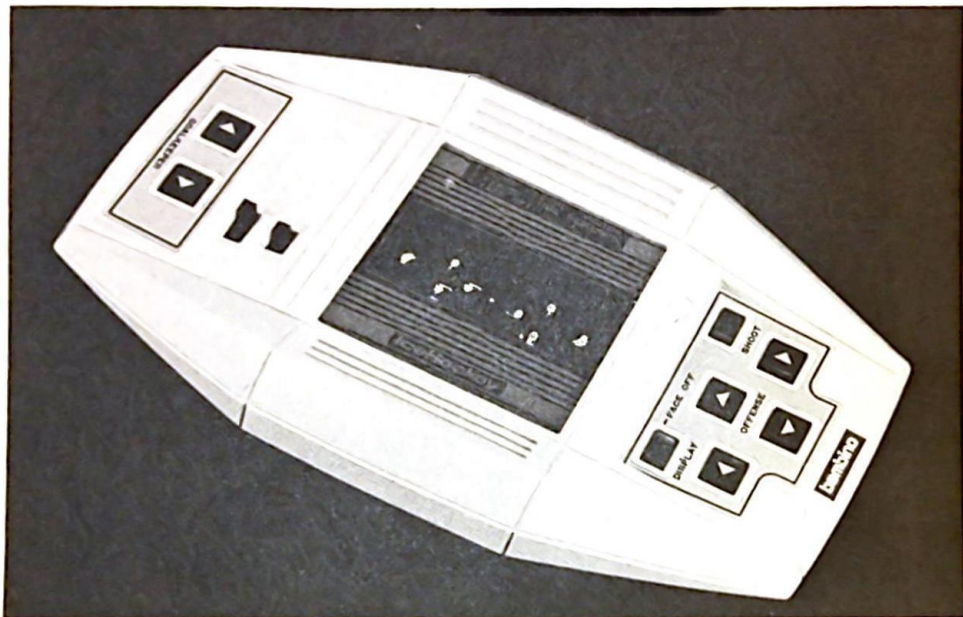
MANUFACTURER: Mattel, Hawthorne, California

PRICE: About \$25

POWER REQUIREMENTS: One 9-volt battery, no AC adapter

RATING: * * *

RECOMMENDATION: If you love hockey and you really want a challenge, try it. If you're less patient, try either BASKETBALL or SOCCER by Mattel—they're basically the same game with less aggravation in the learning process.

*Bambino™***LUCKY PUCK™ ICE HOCKEY**

This hockey game is the same game as Bambino's SOCCER, with only minor design adjustments. The structure of this game, including the division of play into three simulated twenty-minute periods, and the fact that it begins with a face-off display routine, makes this version look and feel more like a hockey game than a soccer game.

Take your pick—either is fun to play.

MANUFACTURER: Bambino, Los Angeles, California

PRICE: \$50–\$60

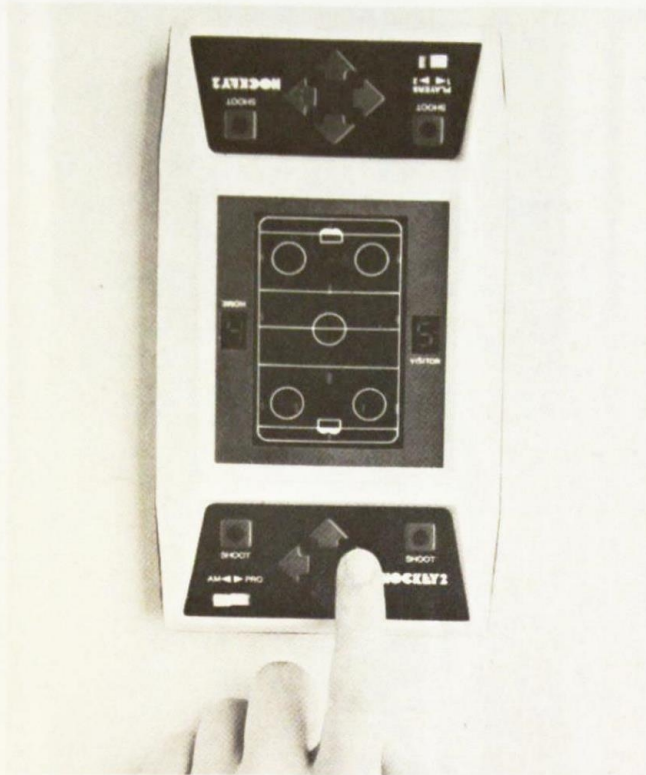
POWER REQUIREMENTS: Four "AA" batteries, or AC Adapter

RATING: ***

RECOMMENDATION: Compare the HOCKEY to the SOCCER, but don't buy them both if you're hoping for different games.

Waddington's House of Games

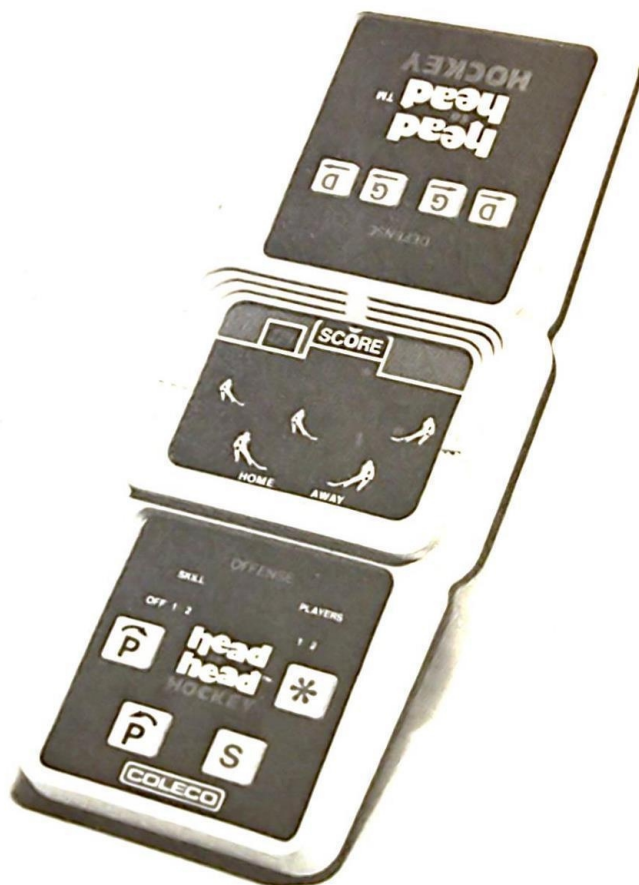
HOCKEY 2™



House of Games is marketing a similar product in different regions. Three key modifications differentiate HOCKEY 2 from SOCCER 2—the goalie's action is played in a smaller goal area; the physical layout of the playing field is drawn to hockey specifications; and SOCCER is a different color (green) than HOCKEY (blue).

Feel free to buy either game—each adaptation is adequate, and solidly competitive.

For details, see SOCCER 2 (page 56).

*Coleco***HEAD-TO-HEAD™ HOCKEY**

Product of Coleco Industries, Inc.

Coleco makes only one game and sells it as either Soccer or Hockey, depending upon the demographics of the market where the game is for sale. This hockey game is identical to HEAD-TO-HEAD SOCCER, with an altered plastic plate on the playing field.

For details, see HEAD-TO-HEAD SOCCER (page 49).

Entex®

HOCKEY

A slightly different playing field has allowed Entex (and several other companies) to sell their soccer game in markets where hockey is a more popular sport. This is simple business—the crossover between markets occurs only in the biggest cities.

For details, see SOCCER (page 50).

Bambino™**KNOCK 'EM OUT™ BOXING**

Bambino's got the only electronic version of boxing on the market, and it's a pretty good adaptation. As with many of the Bambino games, this is played on a customized tabletop console, with a fairly complex display area. If you look closely, you'll see a series of seven small display panels each of which contains a boxer in one or more positions. As with electronic calculators, some or all of the segments in each display light up at appropriate moments, so you really do get the effect of a man being punched and falling backwards into his corner. Each player has six controls, three for changes in body position (*back, normal and ducking*), and three that control the punches thrown (*high, medium, and low*). By keeping a close watch on your opponent, you can spring from a ducking position and catch him unaware—but he can catch you on the way up. Standard volleys of punches, with both boxers standing in their normal positions throwing medium blows, are generally dull and uneventful. If you want to play this game properly, it's best to keep changing your tactics throughout each round.

As in real boxing, final scores are tallied based on the quality of the competition as well as on a knockout. Each successful strike, depending upon your position in the ring, is worth a certain number of points. A knockout seems to be a matter of luck (the right punch at the right time). An inability to control the ferocity of the action can be a problem, because the match always

moves along at the same speed and intensity. The addition of random movements by the computer is also bothersome; everyone who played felt that a secondary force was controlling the game to a greater degree than they were. Occasionally-unresponsive control buttons added to this problem.

Two skill levels ("Golden Glove" and "Professional") affect speed. For one or two players.

MANUFACTURER: Bambino, Compton, California

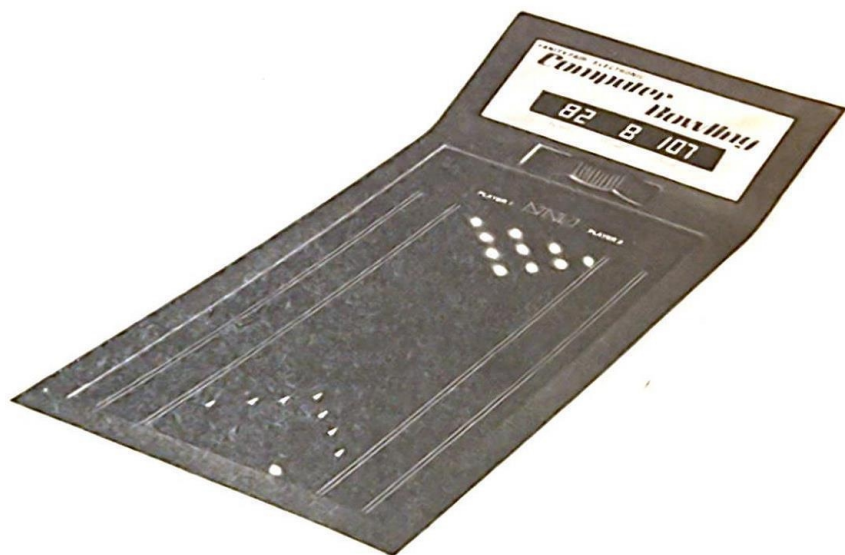
PRICE: \$55-\$65

POWER REQUIREMENTS: Four "C" batteries, or AC adapter

RATING: * * * 1/2

RECOMMENDATION: For either one or two players, this game is fun to play. Despite the frustrations caused by the computer's interference in the match, you will play this game often when you first buy it. Children, incidentally, are not so frustrated by the computer's intervention as adults.

*Vanity Fair***COMPUTER BOWLING**



By combining the wonders of electronics with a mechanical/motorized action, **COMPUTER BOWLING** has effectively captured the spirit of the alleys. The game itself is large—over a foot long—and this expanse only serves to enhance the effect of the alley. Here's how it works:

The ball itself is carried on a conveyor belt of sorts, which moves from left, to right, to left, to right, until the bowler steps up and takes his/her position. By depressing the base of the machine (the entire area behind the foul line), the player sets the shot (press down) and throws the ball (release). The ball (actually a large red blip) travels up its conveyor and into the pins (ten large red blips). If the roll was a good one, all of the lighted pin positions go dark, indicating a strike. Any pins missed on the first ball will remain lit, as the bowler shoots for the spare. After the second ball, the computer automatically resets the pins for the next frame (or for the next bowler, in the two-player version). Strikes are indicated by a large "X" both in the indicator areas and in the main pin area; spares are shown with a slash.

COMPUTER BOWLING keeps score for both players, and allows bonus shots after the tenth frame. With the exception of truly expert ball control, COMPUTER BOWLING duplicates the mechanics of the alleys remarkably well. Scores tend to be high, but since everyone enjoys the same edge, the games tend to be fair competitions.

With a little practice, skillful players can teach themselves to curve and hook by timing the advantage of the conveyor's back-and-forth action during the roll of a ball.

MANUFACTURER: Vanity Fair, Melville, New York

PRICE: About \$50

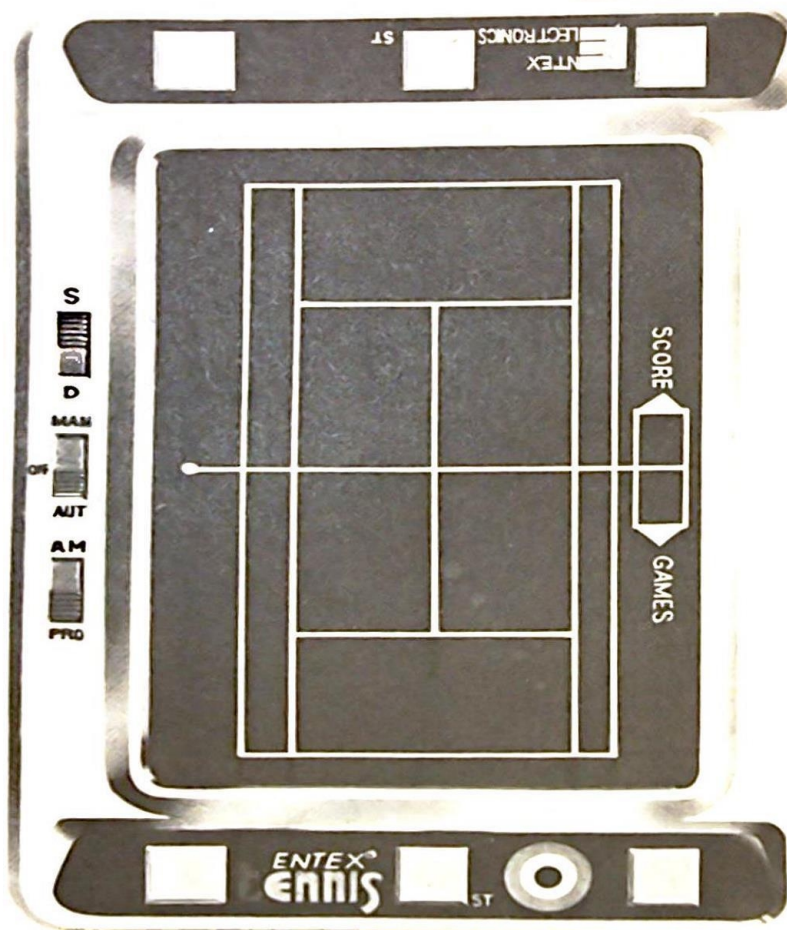
POWER REQUIREMENTS: Five "C" cell batteries, or AC adapter

RATING:

RECOMMENDATION: Assuming that most children start bowling at about age eight, the starting point for COMPUTER BOWLING should be shortly thereafter. Kids will have a tough time adding the scores that multiple strikes are bound to cause. Let the computer keep score—it's easier! (This game is also great fun for adults.)

Entex®

TENNIS



With all of the excitement the original PONG! video game created, it's amazing that there is only one electronic ping-pong or, more accurately, tennis game in the hand-held arena. Entex has created a lifelike match here, and the result is a fine game.

Select "singles" or "doubles," a speed level, and one- or two-player mode (the "doubles" game can only be played by human versus human, and it divides the court vertically rather than horizontally to start the game). Both ball and racquets are represented by red blips. Serve by pressing one of three

"ball return" buttons (left, right, center), and the red "ball" blip travels across the court toward your opponent. Depending upon the side of the court where the blip flies, the opponent uses either the left, the center, or the right directional button to return your serve. The timing of precisely when you hit the button will determine whether the ball is long or short.

Scoring duplicates actual court rules, as each player progresses from Love ("Lo") to 15 on the first point, 30 on the second, 40 on the third. The readout will show "Du" if players tie on the third point, and "Ad" when one player scores an advantage toward the win. The match is won by the first side to win four or more games with a two-game advantage.

The game is normally played by one player against the computer, or by two opponents. The four-player match, where each player handles one side of the court, is not very effective.

MANUFACTURER: Entex, Compton, California

PRICE: About \$30

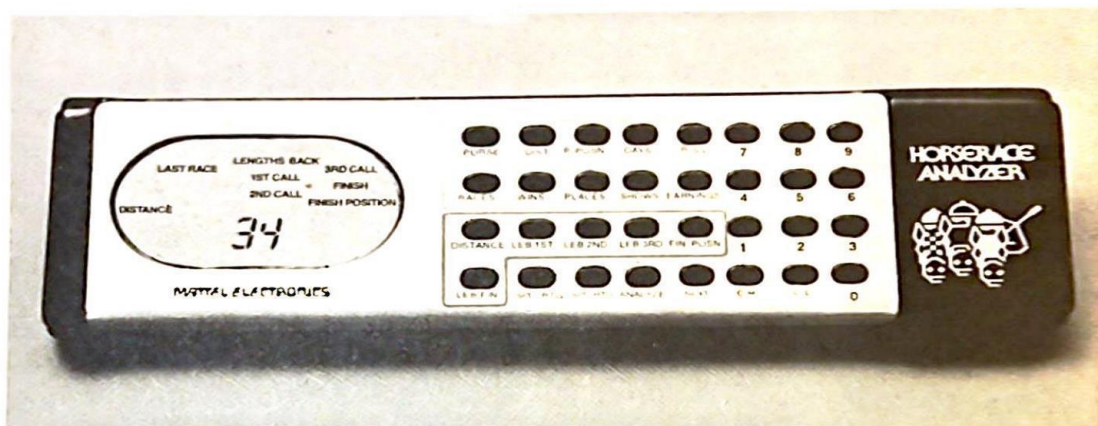
POWER REQUIREMENTS: Three "AA" batteries

RATING: * * 1/2

RECOMMENDATION: The button controls really limit your ability to stimulate tennis's most-used actions, and so this becomes little more than a back-and-forth net game with tennis scoring.

Mattel Electronics®

HORSERACE ANALYZER



© 1980, Mattel, Inc., Hawthorne, California

The HORSERACE ANALYZER is not a toy, not a simulator of mythical horseraces, but a special-purpose miniature computer that enables the user to try to pick the winning horses in any race.

Your *Daily Racing Form* or newspaper racing column provides a great deal of information which you will use in plotting your bets for any horserace. Specific formulas used by expert handicappers have been programmed into HORSERACE ANALYZER's design. The unit itself guides you through step-by-step entries, by flashing its directions on a large liquid-crystal display panel. Enter the *purse* of the race, the *distance* of the course, the horse's *post position*, the number of *days* since its last race, the number of *wins*, *places*, and *shows* in recent races, and the number of *lengths back* the horse finished in previous rounds. Using this and other related information, the HORSERACE ANALYZER plots a *speed rating* that you'll use in wagering. The idea here is that each horse in the race (or at least the horses that look good to you) is assigned a *speed rating*, which you compare across the field before you place your bets.

Mattel's limited testing of HORSERACE ANALYZER resulted in a better-than-50% success rate in picking horses who finished in the money. The rate seems more than consistent with our testing of the computer, and perhaps even a little low.

The manufacturer, as you might well imagine, makes absolutely no claims as to HORSERACE ANALYZER's ability to win races. But it is a marked improvement over hunches.

HORSERACE ANALYZER is a hand-held device designed to be placed in a vest-pocket between races. It comes with a leatherlike case, scratch pad, and pen.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: Up to \$100

POWER REQUIREMENTS: One 9-volt battery

RATING: * * * * * (less if you're unlucky)

RECOMMENDATION: Only for those who are serious about the races. Others are apt to find the sheer number of inputs required for each horse to be a tedious affair.

Parker Brothers®

BANK SHOT™ ELECTRONIC POOL



It takes some time to understand just how this miniaturized billiard table makes the game of pool come alive on an electronic grid filled with red circles. The learning curve, however frustrating at first, seems to be time well spent for the select group that inevitably falls in love with this game. There are four variations of play: solo game or two-player competition (both simply requiring the sinking of the balls on the table); "Poison Pool," which is akin to "8-Ball"; and "Trick Shot," which allows placement of up to seven balls (including the cue) anywhere on the table.

The requisite skills are most easily learned in the first game, which is called up by pressing *select/score* until a game # is shown. *Cue up/shoot* sets the first rack of balls (six balls each rack—this is small table), and then take *aim*. Here's where it gets a little tricky, because you're dealing with rows and rows of unlit red circles. An "arrow" is brought to lighted position by pressing *aim*. Press it again and the arrow will move clockwise one position. Press it once more and the arrow will move again—a total of eight times before the original position is reached. You aim in the direction that you wish the ball to go, and press a second button marked *angle* to perfect the shot (actually,

"perfect" is too strong a word—there are only two available angles, but they are helpful). Now press *cue up/shoot* once and the "cue" will appear, mirroring the image of your aim. Press again, and the cue ball (the brightest one on the table) is released in your chosen direction. You can control the force of the shot by taking your finger off the *shoot* key early. (A musical tune plays and ends when *shoot* has reached its maximum force). The cue ball then reacts, breaks the rack, and knocks the balls all over the table. It really does look like pool, but the time it takes to set up shots can be a little frustrating until you develop some proficiency. Next, you choose an appealing ball anywhere on the table, take aim, fix your angle if you care to, and cue up. Time yourself as you shoot. You can even scratch (I did, a lot at the beginning, then less and less), and lose a point in doing so.

The one-player game uses three racks of six balls each, totaling eighteen balls. For the beginner, this is a very, very long game. For the practiced novice, it's long, but not insufferable. For those who have developed the skill and know the rules and the mechanics well, it's about right.

The two-player game, which uses some of the lights on the board as player-indicator lamps, is played until one player sinks ten balls. You can reset this ten-ball total in increments of tens, for up to ninety balls.

"Poison Pool" is also a two-player game, whose object is to clear the entire table before sinking the blinking ball. One rack, one game.

"Trick Shots" are the most fun, even for beginners, who, when following the truly precise instructions, can do some mighty fancy shooting. By pressing the right buttons, you can place 1, 2, 3, 4, 5, or 6 balls in any positions you like around the table, and then cue up and have a grand old time. Among the most impressive setups is a "Double Kiss," made by banking the cue ball three times with the highest possible accuracy.

After some time, you'll probably master certain kinds of standard shots, as you do in pool. But there will always be the indeterminable element of power, of the speed of the ball, that will allow for fairly infinite variety of play.

MANUFACTURER: Parker Brothers, Beverly, Massachusetts

PRICE: Under \$50

POWER REQUIREMENTS: Six "AA" batteries, or AC adapter

RATING: * * * *

RECOMMENDATION: Very awkward and frustrating for beginners, especially if you're learning the game from printed instructions (and not from someone who already plays). Once you get the hang of it, it's great! Those who master the game—and this one takes a good deal of patience and more time than most of the other games in this book—will be satisfied with its precise action and thoughtful play strategies.

CHAPTER 2

Games of Logic, Strategy, and Memory

Where the games in the sports chapter involved physical agility, the games in this chapter require mental prowess. Which is not to say that you must be a Ph.D.—indeed, children play these games to the highest scores. All of the games require a lot of concentration, from the fantastically simple SIMON to the higher-priced computerized versions of bridge and chess.

The best-sellers in this chapter are SIMON, a memory game that can be played by almost anyone, and MERLIN, a multiple-game computer designed for play by all ages. Each is made by a game industry giant (Milton Bradley and Parker Brothers, respectively), and each has had extraordinarily consistent sales through several rocky years in a fast-changing marketplace. Each game has been copied by less imaginative manufacturers anxious to cash in on a successful trend. The industry calls these copies “me too” games.

The more esoteric games in this chapter are also the most expensive games in the book. Fidelity, Tryom, and Applied Concepts sell electronic backgammon, bridge, chess, and checkers, frequently for a sophisticated audience. Applied Concepts, makers of the Boris chess series, now sells a robotic chess-playing computer for \$1200. *Handroid* has an arm whose hand can physically move pieces around the board—and beat all comers! You can buy a very respectable chess game for about \$100, as you will see in this chapter.

Throughout this section, be sure that you read the rules and know how to play before you buy. Some games look simple and are vexing; others look complex and are childish, dull, and simplistic. Read carefully. I may save you some money.

Milton Bradley Electronics®

SIMON™

Probably named for the child's game of *Simon Says*, the discuslike SIMON has been *the* electronic game sensation ever since its introduction in 1977. For the few who have never played, SIMON was the first to use the “Press *red*, now press *red*, *blue*, now press *red*, *blue*, *green*, now press *red*, *blue*, *green*, *red* . . .” which I call “progressive memory” in a game format.

SIMON looks like a flying saucer, with four brightly colored plastic lenses on its topmost surface (the fourth color is yellow). At the center of the platter is a control area, which allows four skill levels and three game variations.

In Game #1, you continually repeat SIMON's pattern of colors and notes (each color is accompanied by its own musical note) until a razz tells you that you goofed. In Game #2, it is your responsibility to increase the chain of colors by one color on every turn. SIMON repeats each new sequence as you play. Game #3 is a small group version of the first game, with several players keeping a close watch on only their assigned colors.

SIMON is very easy to learn, very, very addictive, and guaranteed fun for everyone who encounters the game. It's also one of the most durable toys I've ever seen—it stands up to kids' pounding on each lens—and they do *pound*—with remarkable vigor.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery and two "D" batteries

RATING: ★★★★★

RECOMMENDATION: Hours of fun, even though you will probably play only Game #1 with any regularity.

Milton Bradley Electronics®

POCKET SIMON™

SIMON's 13" diameter can be a little cumbersome for travel, and so Milton Bradley has introduced a hand-held twin for portable play. The games, the colors, the skill levels, everything is the same as in the original.

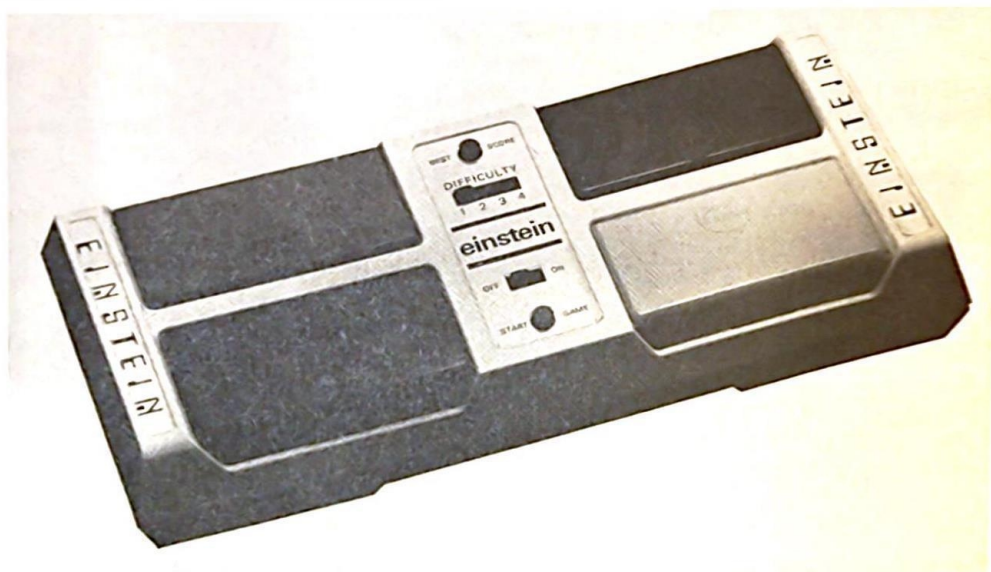
MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: \$20–\$25

POWER REQUIREMENTS: One 9-volt battery and two "A" batteries

RATING: ★★★★★

RECOMMENDATION: Ages seven to adult, but even younger children are likely to enjoy this game once they get the hang of it. Again, the game is very durable, perfect for kids (and aggressive adults).

*Castle***EINSTEIN™**

Here is a nice compact, fairly simple version of the SIMON concept, with not three, but one game—that of basic progressive memory known as Game #1 on SIMON. EINSTEIN plays a note and flashes a color, which you repeat. Then the game plays the original note and adds a color. You repeat, and so it goes.

EINSTEIN can be set to play random sequences of 9, 12, 20, or 32 colors, and if you emerge victorious from your selected task, it plays a fanfare. A *best score* button will repeat your final sequence.

MANUFACTURER: Castle, Newport, Rhode Island

PRICE: \$20–\$25

POWER REQUIREMENTS: Four "C" batteries

RATING:

RECOMMENDATION: As with SIMON, the game EINSTEIN plays is engrossing and fun. Aside from an occasionally annoying rattle (which accompanies the tones for unknown reasons, but only sometimes), EINSTEIN is all it should be.

Atari®

TOUCH ME™

Despite its beginnings as a video game (in the BRAIN GAMES Atari VCS cartridge—see page 268), the pocket-sized TOUCH ME plays three games, each of which is identical to those which appear on SIMON. The key differences are in the scoring, where players can preset their goals to either 8, 16, 32, or 99 colors in a row. A counter logs the number of successful go-rounds as you play.

The game is played by pressing colored buttons; the indicator lights sit beside the buttons themselves.

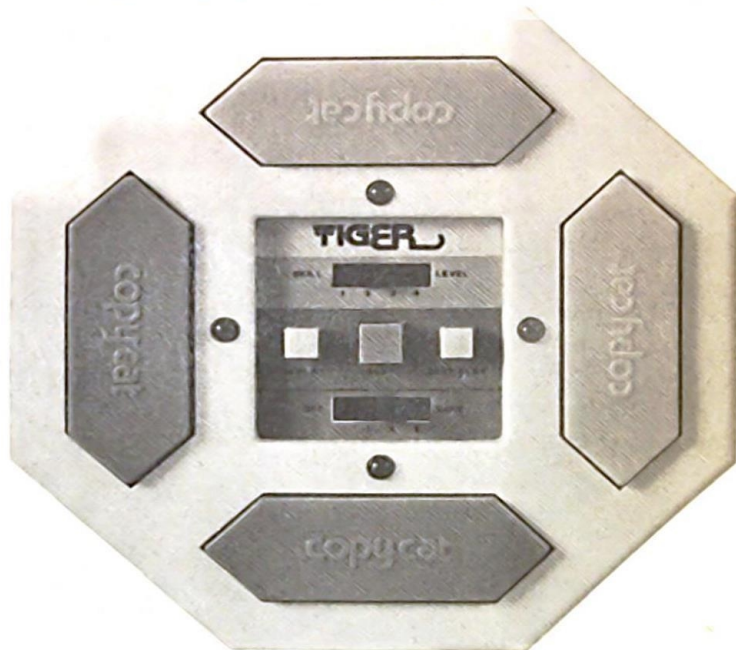
MANUFACTURER: Atari, Sunnyvale, California

PRICE: About \$25

POWER REQUIREMENTS: One 9-volt battery

RATING: ★ ★ ★ ★

RECOMMENDATION: The design is not as technically beautiful as SIMON, but this is a wonderful game for the price.

*Tiger™***COPYCAT™**

Shameless though it may seem, COPYCAT is another manufacturer's carbon copy of the super hit SIMON. COPYCAT plays the same games, for a considerably cheaper purchase price.

There are a few sacrifices—the colored lenses don't light up (indicator lights above them do), the sounds are not as clean as in SIMON, and the physical design is not as technically beautiful and durable as SIMON's facade.

COPYCAT is about one third the size of SIMON, and can be held in your hand. Other than that, it's the "same game."

MANUFACTURER: Tiger, Mundelein, Illinois

PRICE: Under \$20

POWER REQUIREMENTS: One 9-volt battery

RATING:

RECOMMENDATION: By all means, try this game and compare it with SIMON in the stores. Tiger is a smaller company than Milton Bradley, and so you may not find COPYCAT everywhere. As with SIMON, it's a thoroughly intriguing game for all.

Tiger™

DITTO™



This is getting a little silly, now, isn't it? It's not enough that Tiger has cloned a SIMON to make a hand-held version of the progressive memory game—now they're marketing a pocket-sized version of their COPYCAT. There are a few neat features here—like speed-up for extended sequences, but the game is the same as COPYCAT. And once again, the game is a good one, worthy of hours of fairly mindless diversion. Give it a once-over, then make your choice.

MANUFACTURER: Tiger, Mundelein, Illinois

PRICE: \$12–\$15

POWER REQUIREMENTS: One 9-volt battery only

RATING: ★ ★ ★ ★

RECOMMENDATION: The field is now pretty confused, so try them all if you like. Chances are good that you'll be satisfied.

Entex®

MUSICAL MARVIN™

MARVIN plays eight different games all based on the musical scale, using colors, numbers, and tones for each of them. It begins with **MUSICAL CHAIRS**, for two players or more, wherein MARVIN plays a series of notes and leaves out the final note. Players must identify the missing note from a keyboard of eight possible notes. MARVIN then plays 14 notes, then 13, 12, 11, and so forth, until one of the players accumulates a winning score. **MIMIC**, the second game, is your basic SIMON game, played with eight colored buttons. **MYSTERY THREE** is played like Lakeside's **COMPUTER PERFECTION** (see page 94), with each button causing several others to flash on or off. **RECORD** and **PLAYBACK** are activated as two separate games to be played in sequence: first the player enters a series of up to 64 notes, and tries to repeat the same grouping. **NOTE QUOTE** is a game of matching notes of the scale with the buttons associated with each note. **FOUR SCORE** is played first by MARVIN, who tones four notes which must be repeated by human players. **LAST NOTE** requires players to listen to a series of 3 to 10 notes, and to enter the final note in the series. There is an *Organ* mode as well.

MARVIN features a volume control, a speed control, and a tone control, as well as a digital scoreboard and a built-in carrying handle.

MANUFACTURER: Entex, Compton, California

PRICE: \$30–\$35

POWER REQUIREMENTS: Six "AA" batteries

RATING: * * * ½

RECOMMENDATION: Fun for all ages, but none of the games are particularly remarkable.

GAF®

MELODY MADNESS™



This jubilant tabletop jukebox represents GAF's first entry into the electronic game category. This is a musical game of CONCENTRATION, with players required to match identical tunes from numbered circles on a gameboard. It is most easily understood in the play: first, press any of the 24 numbered buttons, and you'll hear a short tune ("Happy Birthday to You," "Freres Jacques," "Row Row Row Your Boat," or any one of several dozen others). Next, press a second button. If the same tune comes up, score yourself a point. Wild notes, identified by a rallying group of electronic note patterns, will match any tune on the board. And of course the relationship between numbers and tunes is changed at random by the computer before every game.

There are three levels of play, starting at the *novice* level (where even-numbered buttons match other even-numbered buttons, and odds-match-odds, making the game a little easier to play), and becoming progressively more challenging in the *whiz* and *expert* levels. A fourth game mode, identified by a single note, turns the playfield into an electronic organ.

The design of this game is absolutely terrific—with the arc atop the jukebox

lighting and flashing wildly whenever a match is made. It's lots of fun, for children or for adults. It's also a little loud, so parents beware.

MANUFACTURER: GAF, New York, New York

PRICE: \$30-\$35

POWER REQUIREMENTS: Four "D" batteries

RATING: * * * *

RECOMMENDATION: For any age, this game is a wonderful twist on a very well established game format.

LJN

ELECTRONIC CONCENTRATION

This electronic update of the decade-old game of card matching requires a good memory and a lot of practice. Here's how it works:

A series of twenty colored buttons hide ten different matches. Press any single button, and a number between 1 and 13 (or the letter "A"—to be explained later) appears on the calculator-style readout directly above the buttons. Let's say the number was 12—the idea of the game is to find a second button which holds a 12. If the numbers shown by pressing any two buttons match, you score points. If they don't match, just remember which number is associated with each button for future matches. The matching continues until the entire board has been paired, at which time the final score is displayed. The letter "A" match is worth five points in your final tally, the "7" match is worth three points, and numbers 10, 11, 12, 13 are all valued at two points. All the other matches are worth a single point each.

ELECTRONIC CONCENTRATION can be played by one or two players, with little difference in the game's rules. Each match entitles players to an

additional turn. A "change" light beneath the scoreboard reminds players to pass the game over to the opponent before accidentally pressing out of turn. An "error" light shines when an illegal move is made, most often seen when you try to reuse a button that has already been matched. It is occasionally difficult to remember which buttons have been used since the display (and not the buttons themselves) shows all game information.

MANUFACTURER: LJN, New York, New York

PRICE: \$25

POWER REQUIREMENTS: Four "AA" batteries

RATING: * * ½

RECOMMENDATION: Adults and experienced game-playing children may tire of this simple matching game. The fact that the buttons do not display their own numbers makes the game a little frustrating as well. Suggested range begins at five years of age, which seems about right.

*Castle***TACTIX™**

TACTIX has adapted four games of strategy, all of which will be familiar from their non-electronic formats. All of the games are played on a 4" x 4" grid of sixteen buttons which either blink or shine steadily when depressed.

The first game, CAPTURE, is a new version of the ancient game of REVERSI (recently marketed as OTHELLO). The idea here is to use your blinking buttons to surround your opponent's solid buttons, on alternating turns, to capture as many buttons as possible at game's end.

The second game is a revision of peg-jumping solitaire. Fifteen of the sixteen lights are "on" at the start of the game, to receive a jumping "peg." To jump, press a button two spaces away from the open space. It will blink when you touch it. Now press the darkened button. You'll notice that the peg between the two spaces you've activated will now go dark, and that the originally lit button will also go dark. The idea here is to continue this jumping action until only one button remains lit . . . and that's a perfect score.

The third game is very much like Milton Bradley's CONNECT FOUR (see page 234 in the MICROVISION entries). The idea here is to compete with an opponent to string three blinking buttons in a row. The blocking strategies involved are a lot like tic-tac-toe, but the overall game is far more interesting.

TACTIX' fourth game is CONCENTRATION. There are eight pairs of sounds hidden in the board—from one bleep up to eight bleeps. Button 3, for example, might hold four bleeps, and would match, say, button 12, which also holds four bleeps. The matching of buttons here is indeed similar to the old card-matching game. The identification of bleeps to buttons, incidentally, is totally random and changes with each new game. The idea here, of course, is to match as many pairs as possible in each game.

MANUFACTURER: Castle, Newport, Rhode Island

POWER REQUIREMENTS: Six "AA" batteries, no AC adapter

PRICE: \$30–\$40

RATING: * * * ½

RECOMMENDATION: Most of the games here have been adapted from board games with larger boards, and there has been some loss of complexity in translation, particularly in the first two games. These difficulties are rarely encountered by younger players, and so the overall TACTIX unit will be best for a pre-teenage group. I must admit that this adult had a tough time putting it down, even with its ingrown simplicity. It's a good toy.

Milton Bradley Electronics®

MILTON™

From the makers of the occasionally frustrating SIMON comes MILTON, a delightfully obnoxious matching game that talks. It talks a lot, as a matter of fact.

The game is played on a console roughly the size of SIMON—a 13-inch round disc about the size of a large frying pan. The top surface contains all play switches and buttons. One side of this surface contains seven red buttons, and on the other side of the divider sit seven yellow buttons. Start the game, touch a red button, and listen to MILTON spout a half-phrase, "*Park Your . . .*" Touch a yellow button and you might hear the word *turkey*. Now we know the word *car* is identified with one of the yellow buttons, and that some other, unrelated verb-article combination is to be found under one of the red buttons. MILTON, never one to miss a quip, repeats the newly created phrase and then comments: "*Park your turkey—not in my driveway you don't!*" He then instructs the next player to press any red button. The next button might result in "*Crack the . . .*," which will match up with *egg* on the yellow buttons. You choose a button, only to find the word *house*, to which MILTON makes another crack designed to make you feel like a fool. The game goes on until each of the seven matches has been made.

MILTON is designed as a party game, for there are only 18 phrases in his memory, and these phrases do wear thin after you've heard them 12 or 13 times. For the first few weeks at least, MILTON is an absolute panic. (And he's fun to play, too.)

There are three variations on the basic game, for one or two or more players. MILTON, incidentally, keeps his own score (but not without commenting about how well everyone has done).

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: \$60–\$80

POWER REQUIREMENTS: Plug into electrical outlet (no batteries)

RATING: * * *

RECOMMENDATION: Plan to play very often for the first month you own the game, and to tire of the game a few weeks later, at which time you will take it out of the bedroom drawer only for parties and at the request of your children. Ages seven to adult seems reasonable, but the younger kids will have more patience and will concentrate on the game itself more readily than the adults.

*Ideal***MANIAC™**

Kids loved it, and adults walked away wondering what all of the excitement was about. That's the story of our MANIAC tests, a strangely beguiling tabletop game for two, three, or four players. The way to play MANIAC isn't at all clear from looking at this mysterious black box, nor is it apparent through the random play with its assorted controls. You really *must* read the instructions to find out how to play. MANIAC is a game of reaction and memory, but the game itself is not nearly as inspired as the competition it causes, especially with the younger set.

MANIAC plays a sequence of four different games. You cannot shift from game to game if you favor one or another. You must play through the entire

sequence of four "challenges," each one played three times in each cycle. The first challenge is called MUSICAL MANIAC, and the idea here is to be the first to respond when a random melody *ends*. If you press your MANIAC panel within one-quarter second after the tune ends, you score two points. If you respond within one-half second, you score one point. After one-half second has elapsed, you score no points at all. Considering the fact that the player who wins MANIAC is the one who first amassés twenty-five points, it is best to respond with the greatest possible precision. MUSICAL MANIAC is played a total of three times, and at the end of each rally, each player's accumulated score is played on the top-of-game readout.

SOUNDS ABOUND is challenge number two, wherein MANIAC plays a rapid series of notes and tones to be counted by each player. At tune's end, the MANIAC panel must be tapped as many times as there were notes in the song. Score two points for the correct count, one point if you've erred with one note too few or many, and zero points if you were off by more than a single count. Play SOUNDS ABOUND three times, and then on to the third challenge.

LOOK TWICE is played on the pair of seven-segment digits previously used for scoring. A random grouping of segments are lit, to be memorized and later matched by all players. We first see the random pattern, then three more patterns, which may or may not duplicate the first pattern shown. Players must identify the match (or lack of a match). Scoring is based on the speed of your correct response. Play three times, and MANIAC follows with the fourth challenge.

YOUR TIME'S UP is a game of time estimation. One long tone is sounded, followed by silence, and then by a second shorter tone. Players must press their MANIAC panels for precisely the number of seconds elapsed during the *silence*. Points are scored if you duplicate the seconds of silence within one-half second.

Challenge #4 is played three times, and it is followed by game #1, then #2, and so forth. The competition is over when one player scores 25 points. MANIAC increases its game difficulty automatically with player proficiency.

MANUFACTURER: Ideal, Hollis, New York

PRICE: \$40-\$50

POWER REQUIREMENTS: Four "C" batteries

RATING: * * *

RECOMMENDATION: If you're a kid, or very patient, add a star.

Milton Bradley Electronics®

COMP IV™

Every February, the Toy Manufacturers of America stages a mammoth exhibition in their New York City headquarters to introduce the year's Christmas line. Toy retailers and chain store buyers stroll from showroom to showroom, ordering merchandise to fill their shelves come "the season." Milton Bradley, as you might expect, puts on a particularly impressive show, but never has its showroom been so magical as it was in 1977, for that was the year that Bradley introduced its very first hand-held electronic game, COMP IV. Months before the desktop unit was available, a dozen of these miraculous new machines were placed in the demonstration arena, each one available for play. In the center of the demonstration stood one enormous COMP IV, looking more like a game show's bonus board than a retail toy. Back in those days (three years is a long time in this toy industry), few of us had ever seen the likes of anything as remarkable as COMP IV. You would type in a random selection of three, four, or five digits, and the computer would tell you *instantly* whether your digits matched the ones it had selected at random from its own memory. Some deductive reasoning (see this volume's entry on SUPERSONIC MASTERMIND, page 96, for games which require deduction), and your correct answer would cause all of the lights to flash, indicating a correct answer. In 1977, COMP IV was magic.

A short time later, COMP IV was showing signs of becoming obsolete, if only for a single design inadequacy. The game play is in itself every bit as intriguing as MASTERMIND and SCRABBLE SENSOR (all are virtually the same game, with letters instead of numbers used in the hidden combinations in SENSOR). The controls and displays are clear, well designed, and always dependable. But there is no way to "give up." If you become weary of play (these games can make anyone weary after enough hours of play), there is no way to find out the correct answer. In fact, the only way to recognize a correct answer is to type it in yourself. This can become frustrating, particularly in matches involving four or five digits in the chain.

For those who are confident that they will never need a machine's assistance in playing a game, however, COMP IV may be a dream.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: \$20–\$25

POWER REQUIREMENTS: One 9-volt battery

RATING: * * * ½

RECOMMENDATION: Effective as a children's game (for bright children) as it is an adult game; the design is durable, the buttons are large, and the overall approach is typically Milton Bradley—fun for all ages.

Selchow & Richter™

SCRABBLE® SENSOR™
ELECTRONIC WORD GAME



SENSOR is not, contrary to first impressions, an electronic version of the Scrabble crossword game. Instead, SENSOR is an exercise in deduction similar in play to COMP IV or MASTERMIND, where letters instead of colors or numbers are grouped in elusive combinations.

The game has a futuristic design with a 26-letter pressure-sensitive keyboard and four control buttons (*enter*, *clear*, *space*, *auto*), and a single

double switch in the base. Two rows of lights provide all feedback, in an upright display panel. The game is most easily explained in the solitaire (*auto*) mode: start the game in single mode, then press *auto*. SENSOR first selects a four-letter word at random from a limited vocabulary (all related to space travel) and is then ready to receive the first guess. We touch the letters "MOON," and SENSOR tells us that one letter in the word "MOON" is also in the mystery word, and that one letter is in the correct position. We "test" the "O" in the second position, and build a new word, "NOVA." SENSOR lights no letters and no positions correct. On the tally sheet (provided in pad form), we deduce that because there is no "N" or "O" in the computer's word, the only letter in the word "MOON" that is correct is the "M" which is also in the first position. The process continues until the word "MARS" causes all four letter indicators and all four position indicators to flash on and off, rewarding a correct answer.

Two other versions of SENSOR can be played as well. In Single Word Mode for Two Players, one player programs a word of two to seven letters, and the other actually plays the game by forming test words with strategic letters. The Double Word Mode allows two players to each enter their own words.

SENSOR is effectively a scoreboard for jotto players, with one flaw in the *auto* mode. Newer players, who have not yet developed a strong ability to deduce the correct combinations, cannot "give up" and see the elusive word. There is no letter display—only indicators which count correct answers.

MANUFACTURER: Selchow & Richter, Bay Shore, New York

PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery, or 7½ volts positive tip AC adapter

RATING: * * *

RECOMMENDATION: Despite S&R's "7 to adult" suggested play range, those under 10 are likely to need a lot of help from parents.

*Lakeside®***COMPUTER PERFECTION™**



Frequently vexing, occasionally frustrating, and consistently challenging, Lakeside's COMPUTER PERFECTION is one of the most popular electronic games. It is played on a circular field, enclosed by a plastic globe, which give it a futuristic appearance. If you have the patience, you'll find yourself occupied for hours at a time.

There are four games: two solitaires and two games for two players, all quite similar. There are ten buttons and ten lights. When you press one of the buttons, one or more of the lights turns on or off.

In the first game, each button will cause a light to glow. You'll notice that each light is numbered (0–9). You must first find the button that causes #1 to glow, then find the button that causes #2 to glow, and so forth, through number #0. There are three skill levels—the first essentially allows all possi-

ble flexibility within reasonable time limits, the second allows only 30 button presses to work out the logic of which-button-causes-which-light-to-turn-on, and the third allows only twelve chances to score the sequence (this is nearly impossible unless you're psychic). In all cases, you must light the lamps in numerical order.

Game #2 is essentially the same game as #1—with a penalty. Each time you mistakenly press a button which you've already used to light a lamp in sequence, the game's progress zips back to the point in the game when you last used that button. You must then retrace your steps, avoiding further error. It is a fine jeopardy game.

The third game is the most fun of all, because it pits two players against one another in a most challenging battle of wits and patience. One player tries to turn all lights on, by pressing an appropriate combination of buttons through the course of the game. The other player tries the opposite—to turn all the lights off. Since the buttons seem to have their own logic, this can be a baffling task at the start of the game, and will certainly be a brain race by the end, as each button's capabilities become known to both players. The fourth game is a simplified version of the third—a race to light a specific number of lamps before your opponent.

Advanced skill levels are available in every game.

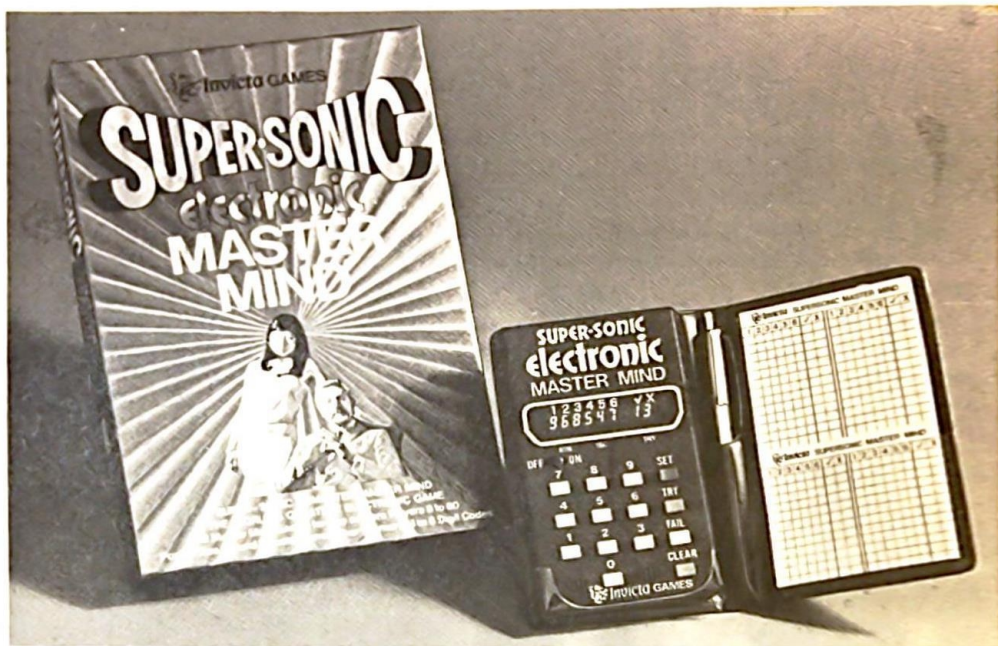
MANUFACTURER: Lakeside, Minneapolis, Minnesota

PRICE: About \$40

POWER REQUIREMENTS: One 9-volt battery

RATING: ★ ★ ★ ★ ★

RECOMMENDATION: If you have the patience, this game is a joy.

*Invicta Plastics***SUPERSONIC ELECTRONIC MASTERMIND®**

This is the only legitimate electronic version of MASTERMIND, the superior table game of logic and deduction. In this revision, Invicta has replaced their red, blue, yellow, white, green, and black plastic pegs with electronic digits (0–9), and the black or white clue pegs with an electronic checkmark or “X” mark. The game is the same as it has always been, and with the same rules and the quality of the entire MASTERMIND line.

For those who have not yet played MASTERMIND, it is an easily understood game of logic, the object of which is to deduce the correct combination of digits. Let's say that the hidden combination is 9–4–6, and you start your series of guesses with 9–6–2. The game would tell you that you have guessed one digit in the correct position (the checkmark), and one digit in the wrong position (the “X” mark). You guess again, hoping that it is the “9” causing the checkmark, and type in 9–3–2. The response: one checkmark and no “X” marks, telling you that you have one correctly placed digit—it could be the “2,” the “9,” or even the “3.” You place another guess, 9–7–8, and MASTERMIND responds with that same one checkmark, no “X” marks. You follow a hunch, keep the “9” in place, and mentally dismiss the numbers 2, 3, 7, and 8 (there is a certain amount of faulty logic in this assumption, but you're playing against time, and so you must take risks and play hunches).

Try again with 9-6-1, and you get one checkmark (it's looking more and more like that 9 was a good assumption), and one "X." Replace one of the numbers, and switch the final two, and 9-0-6. You get two checkmarks, and no "X" marks. It looks like the 6 in is the right place. Try a different number in the middle and see what happens. Type in: 9-5-6, and those two checkmarks reappear, with no "X" marks. Try another number in the middle: 9-4-6, and sure enough, a winning tone sounds and all of the numbers start to flash.

SUPERSONIC MASTERMIND allows combinations up to six digits, and includes a clock to time each match, and a counter to track the number of tries used to find the answer. If you give up, there's an appropriately labeled *fail* button, a necessity if frustration takes its fiendish course. Other features include manual-code entry, so that opponents may enter codes in the computer's stead, and according to Invicta, over a million combinations of digits available for play.

There is an earlier version of SUPERSONIC MASTERMIND, called simply ELECTRONIC MASTERMIND, which is also available. Aside from the absence of sound effects and the timer, the original version offers combinations up to five digits. Other than that, the games are virtually identical.

MASTERMIND comes packaged in a vest-pocket folder, which includes a pen and scoresheet (you will almost certainly need these implements if you play the five- or six-digit versions).

MANUFACTURER: Invicta, New York, New York

PRICE: \$30-\$40 (the original ELECTRONIC MASTERMIND sells for under \$25)

POWER REQUIREMENTS: Two "AA" batteries, or AC adapter (low voltage requirements)

RATING: * * * * *

RECOMMENDATION: This is a game for adults and perhaps those children who are not easily frustrated (perhaps 12 to adult). It is effective in every way, always challenging, always an addiction to those who care to beat the machine.

*Parker Brothers®***STOP THIEF!®**

With this game of electronic cops and robbers, Parker Brothers has successfully blended the infinite possibilities of hand-held electronics with a formula board game, opening a new world of potential formats for the game industry. STOP THIEF looks a bit like CLUE, one of Parker's classic board games, but the games are quite different in their play.

STOP THIEF is a game for two, three, or four "detectives," each of whom gathers clues and chases an invisible electronic burglar through the streets of a small city. The movements of this bad guy are cooked-up in the brain of

the "electronic crime scanner," an oversized calculator whose digital readout displays information about the thief's movements throughout the gameboard. Numbered gameboard positions facilitate the search.

At the start of each game, a crime is committed and a reward is set. The crime scanner immediately displays the building in which the robbery occurred, allowing players to locate the thief in one of four or five "red spots" within the chosen building. As each detective races toward the burglarized building via dice rolls, the scanner provides additional information. We hear a door open directly after the crime occurs—so we know that the red spot where the crime was committed must have been adjacent to a door. We then hear footsteps running down a street (between the buildings there are streets, subways, and newstands), and attempt to locate a red spot that is adjacent to a door which leads to the street. All detectives hear the same clues, but the readout, showing the *number* of the particular building where the door sound or the window sound was heard, is seen only by the detective "at bat."

The thief keeps moving, leaving a steady trail of clues for the intrepid detectives throughout the game. Sooner or later, one detective has a hunch that he or she is standing next to the invisible thief, and when he does, the "Arrest mode" is used on the crime scanner. The process is simple—just type in the number of the spot where the thief is believed to be hiding. The scanner will react with one of three sounds—a successful arrest, a false arrest (wrong guess), or an escape.

Several thieves must be caught in order to win the game—a feat accomplished by accumulating \$2,500 in reward money.

"Tip cards," which allow you to buy information from an informer (the crime scanner), will generally allow you to ask the scanner about the actual position of the thief—then the trick is to race toward the thief before he changes course once again.

MANUFACTURER: Parker Brothers, Beverly, Massachusetts

PRICE: Up to \$50

POWER REQUIREMENTS: One 9-volt battery

RATING: ★ ★ ★ ★ ★

RECOMMENDATION: For all ages, solid family entertainment.

*Ideal***ELECTRONIC DETECTIVE™**

Using a series of seemingly unrelated clues, the sleuth (that's you) must link bits of information in an attempt to find the murderer. The plot's been around for years, but this particular version will really stretch your logical wiles. It's really a fine lesson in how a computer system works—you must process an array of simple facts in a highly logical manner. Which is not to say that this game isn't fun. It is, but you'll really have to pay attention as you interrogate each of up to twenty suspects. A sample match illustrates the fine points of the search.

Before play begins, you must enter the number of detectives involved in the case (one to four players), and the skill level desired (controlling the number of questions permitted in the interrogation of each witness). For

purposes of explanation, let's play with only a single player in the "Gumshoe" mode (the least challenging, allowing the most "private questions" in each round of questioning). Each game actually starts with electronic gunshots and a short funeral dirge, followed by a display of the victim's identification number, and the location at which the corpse was found. The very first thing to do is to cross off the location and the number of the murdered victim from your "Case Fact Sheet" (a cross-referenced tabulator sheet—provided); the thief never returns to the scene of the crime. The game now becomes a race to figure out who committed the murder, using a complicated cross-referencing of where the weapon was found (any self-respecting murderer would *never* remain in the location of his or her weapon—a fact to be used in concert with others later in the game), the murderer's sex, his/her location (uptown, downtown, or midtown *and* east or west side), the weapon used, the "fingerprints" of the perpetrator (this is the weakest metaphor—what Ideal is really saying is that someone will tell you whether the evil party has an odd or an even numbered card).

All of the facts are found by questioning suspects, whose numbered cards (#1 through #20, with the murdered party pulled from the pack) are used one by one in the questioning. The computer has told us that #12 was killed, so let's arbitrarily start the query with #13 (you can start with any suspect). Piper Perez, a Latin singer, is pictured on card #13 (the picture and personality profile mean nothing, but the cartoons are funny), and so we enter her number into the computer, by pressing *suspect*, then #13, then *enter*. She's not talking much—she'll only say that she was with #2 and #18, but she won't say where. We ask a "Private Question" (there are five private questions on each suspect's card), asking "What area did the murderer go to?" and we find out that the murderer went *uptown*. We ask if she knows anything about "fingerprints" (knowing that there is a custom rule here that only a member of the same sex who is at the location of the murder weapon can tell us anything), and find out that she knows nothing. Following her lead to #2, we find out that Al Farook (#2) was on the west side, uptown, which tells us that #13 and #18 were also in the same location—but we still don't know whether they're all holing up at the Factory, the Docks, the Theatre, the Card Party, or the Embassy (but they can't be the Art Show, because that's where the body was found). In private questioning, Al says that a male did not do it (so a *female* did—check that off on the fact sheet), that the murderer went uptown, and that the murderer was not on the east side (so he was on the *west side*). This merely verifies previous information, so we dismiss him, and we question #18, that famous lady newscaster, Doris Dill. Doris tells us that #7 was also with them, and that the murderer went to the west side (check it off). She's not much more help, (in other words, she had questions on her card whose answers we already know), and so she's dismissed. Rip Rapp, #7, tells us that he was at the Factory, and so we know that the whole group was at the Factory. He also says that one of the two guns was hidden in the Theatre.

Using this information, and similar data provided by other suspects, we determine that the murderer was female, on the west side, uptown, with an odd number, and that the weapon used was a .38. The possible suspects become #11, #13, #15, #17, and #19, and we start eliminating: #19 was in midtown, so she's not the murderess . . . and so forth. Depending upon luck and the right grouping of questions, there can be an "Accusation" after about five to ten minutes of play. But you'd better be right—in the one-player game, it's all over if your accusation turns out to be a false arrest. (In the two-player game, the mistaken detective is out of the game, and the opposing gumshoe has one more turn to finish the game).

DETECTIVE sits on a tabletop, fully equipped with keyboard, calculator-like display, and twenty-card file. Two thick pads of Case Fact Sheets are included, with more available from Ideal at \$2 each.

MANUFACTURER: Ideal, Hollis, New York

PRICE: \$30–\$35

POWER REQUIREMENTS: Six "AA" batteries

RATING: * * * * *

RECOMMENDATION: Ideal recommends this game for ages ten to adult, and we agree. The game looks deceptively childish, which is a shame, because this game is actually a very advanced, challenging MASTERMIND variation. This is a *super* game.

*Epoch***DETECTIVE**

Logic, quick thinking, and acute judgment are required to catch a thief, and no thief is more crafty than those who hide in the nooks and crannies of DETECTIVE. The game begins as the thief (either you or the computer) leaves the airport, and weaves his way to the art gallery, the bank, and the jewelry store, and finally back to the airport for a clean getaway. Your every move is carefully scrutinized by your opponent, the detective, as he attempts to follow and eventually arrest you along the way.

The game itself is fully electronic, played with familiar red blips representing both parties, as they move beneath the streets of a mythical city. Unseen to one another, the participants are known only by the category of thoroughfare used to get from place to place. If you look carefully at the gameboard, you'll notice that there's a matrix of sixteen boxes on the board, each one outlined by several different colors. You move from each darkened square to an adjacent one on every move, and when you move on a *green* path, for example, a specific electronic jingle will play (if you move on a *red* path, it's another jingle, and if you move on a *yellow* path, it's a third jingle that plays). The way in which these colored pathways are arranged can either allow an easy tracking of the thief, or a totally misleading trail. And that's the fun and the challenge of the game—to use your best instincts to follow your opponent's moves by pure logic (and a lot of luck). Newer detectives and particularly paranoid thieves will find clues as to each other's position built into the game's rules via a *Search* button on each side. An *Arrest* button allows the detective to capture his prey at the right moment; you will find that the allowance for two false arrests will be used in all but the luckiest situations.

Scoring is based on the number of successful moves made by the thief, the number of false arrests, and a variety of other related factors. There are two skill levels, the second of which places time restrictions on each move.

MANUFACTURER: Epoch, Englewood, New Jersey

PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: * * * ½

RECOMMENDATION: This is a thoroughly challenging game which offers considerably more than most thinking toys in terms of the depth of play offered. It's captivating (especially if you're the thief, which is more fun than playing detective), and a good competitor can keep you playing for hours. For all ages, starting at about eight (the logic of the color paths takes some thinking, but children, once they understand, usually beat the adults).

Milton Bradley Electronics®

ELECTRONIC BATTLESHIP

The game of battleship, taught to me by my father using only a sheet of graph paper (which we tore in half and shared) and two pencils, was one of the first games to "go electronic." The game's the same as the original, but now it makes noises and practically explodes when a battleship, cruiser or other maritime vessel is destroyed by the opposition.

BATTLESHIP is played by two warring factions, each of whom owns a portion of the sea, represented by a 10 x 10 inch plastic grid. On your grid are placed plastic ships, each of which occupies certain linear positions on the grid (in other words, one ship might occupy spaces A-1, A-2, and A-3 on the grid, while another might hold spaces F-6, G-6, H-6, I-6, and J-6). These positions are entered into ELECTRONIC BATTLESHIP's computer memory at the start of the game by each player (each player has an input keyboard). The entry procedure is a ritual that takes a good few minutes, and must be done with perfect accuracy. Now the game is ready to start.

One player names a sea position, perhaps "D-2," enters first a "D" and then a "2" into a small keyboard on his or her side of the barrier, and presses a button marked *fire*. If the small monitor explodes in the color red, an enemy ship has been hit. If an insignificantly bleep is heard, play continues with the opposition identifying a new sea position.

The game continues until one of the navies has been devastated.

Impressive though BATTLESHIP's hardware may be, the old pencil-and-paper formula is just as good and easier to play. Each ship position must be entered manually in the electronic game (it is easier and faster to blacken squares on graph paper), and no features improve play because there's a computer on hand. Only the noises and the ability to blow up opponents' ships with a greater degree of realism make ELECTRONIC BATTLESHIP a more fascinating game than the original.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: \$30-\$35

POWER REQUIREMENTS: One 9-volt battery, no AC adapter

RATING: **

RECOMMENDATION: If you are unfamiliar with the original, ELECTRONIC BATTLESHIP is a solid game of deduction. The electronic effects are impressive, but it is unlikely that they will impress veteran battleship aficionados.

*Ideal***THE GENERALS®**



Contrary to the impression I formed in my mind by looking at the packaging and marketing materials on THE GENERALS, this is not a fully electronic war game. Instead, it is a tabletop strategy game with manual operation and some electronic hi-jinx in the scoring of the game. It's worth a look. . . .

Throughout the world, there are dozens of variations on the game that we call chess. THE GENERALS is a Filipino variation, wherein each play piece is assigned a numerical fighting power (instead of move capabilities, as in chess). When two pieces from opposing sides come back to back in a confrontation (human players never see the opposing fronts of the pieces, so they never know the value of the soldier who beat their own—of key importance), a third party serves as "arbitrator" identifying the winning and losing pieces. It is this function that has been taken by the electronic brain that is the heart of THE GENERALS. When two play pieces meet in battle, both are removed from the board and placed on a special set of platforms, designed to react to various pegs beneath the base of each individual play piece. (Upon close inspection, you'll notice that the pegs beneath the Private differ from the Sergeant's peg configuration, for example). There are 15 different play piece designations in a full army of 21 per side.

The object of THE GENERALS is to capture a *flag*, a task accomplished by confronting the unidentified flag piece face to face with any piece in your army. Like the King in chess, the Flag cautiously moves around the board,

and like the King, he is protected by all other pieces in the army. Unlike chess, however, the Flag may win the game for its own side by reaching the opponent's back row on the playing field.

There is no way to play against a computer here, since the computer's only function is to arbitrate. It is player versus player, in the tried and true tradition of tabletop gamesmanship.

MANUFACTURER: Ideal, Hollis, New York

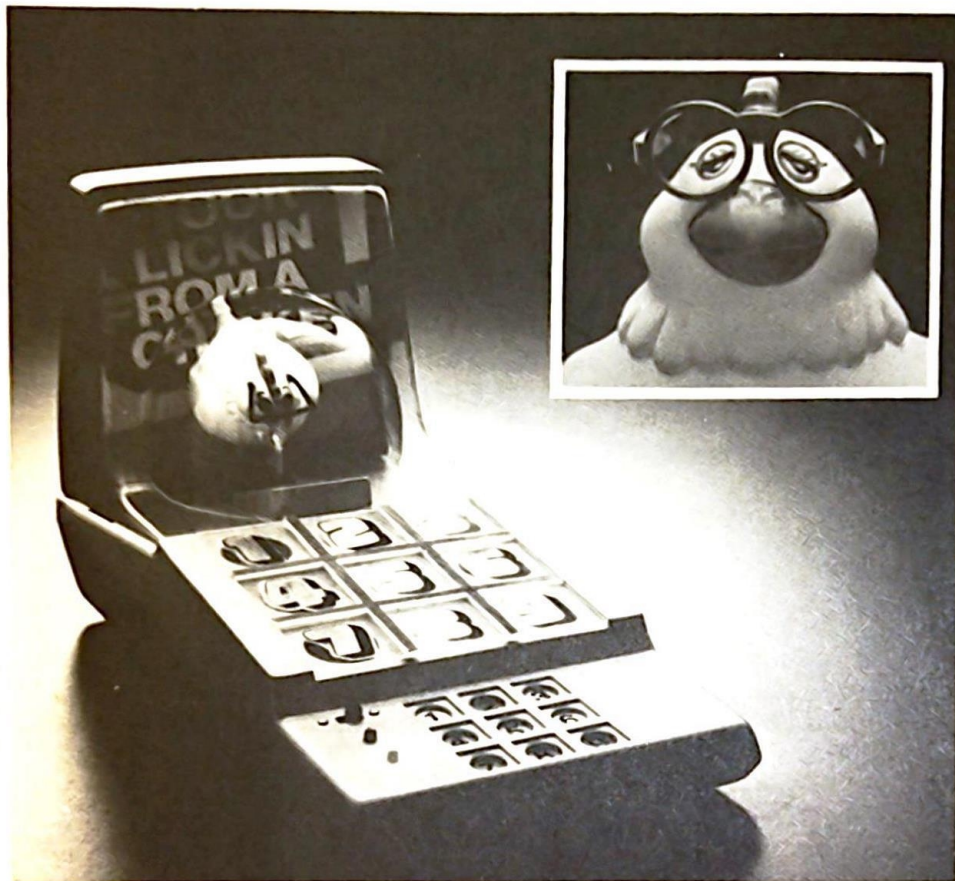
PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery (*Note:* There is no on-off switch here, because the computer is activated only when playpieces are pressed onto the peg-detection panel. As with all electronic games, the battery should be removed if the game is to lay dormant for a time.)

RATING: ★ ★ ★ ★

RECOMMENDATION: The above rating is based on the quality of play, which is very good. You will find, however, that this game really is much more akin to STRATEGO (a non-electronic Milton Bradley game) than it is to other games in this book. The fact that there are electronics involved—likely to become a trend—does not necessarily mean that a game will be based on an all-electronic format. For ages eight to adult, a very good game.

LJN

I TOOK A LICKIN' FROM A CHICKENTM

The computer-as-chicken concept is relatively new to the field of high technology, but this little clucker pecks one heck of a game of TIC-TAC-TOE. (And if he perhaps she, wins the game, he/she/it simply stares through an obnoxious pair of eyeglasses and cackles at the loser. A most ungracious winner.)

I TOOK A LICKIN' pits human against plastic poultry in four specific challenges, and in every case the part of the computer is aptly portrayed by a plastic hen, sitting pretty, perched in a globe overlooking the electronic playing field. If you look at the picture, you'll notice a playing field divided into a tic-tac-toe board, with each square numbered. Below the electronic display is a set of push buttons that the company calls the "Challenge Panel," and it is here that the human responds to the chicken's every whim. In TIC-TAC-TOE,

each move is plotted when the *Chicken/Player* indicator lamps glow in the *Player* direction. In CHICKEN SEZ, an internal force generates a SIMON-like progressive memory code, which is first duplicated by the chicken and then by the human player using the panel. In the two TOTAL RECALL games, where the chicken displays a random grouping of up to nine numbered boxes in the "lit" mode, the keypad is used to enter the sum total of all numbers indicated (TOTAL RECALL I allows twelve seconds for your answer; TOTAL RECALL II allows only nine seconds).

I mentioned that obnoxious chicken laugh when the poulet is victorious. An electronic rendition of "Old MacDonald" is played when the human player wins the game.

The games are all very short (as short as a game of TIC-TAC-TOE) and very easy to learn, even for the youngest players.

MANUFACTURER: LJN, New York, New York

PRICE: \$30-\$40

POWER REQUIREMENTS: Four "C" batteries, no AC adapter

RATING: * * * *

RECOMMENDATION: The hen's limited vocabulary (and vociferous tone) will drive most folks mad, so keep the chicken as a conversation piece or children's toy (if and only if there is a door you can shut between your ears and the bird's mouth).

We're told that the chicken can be the life of any adult party as well. (It isn't often that you run into a chicken who plays a good game of CHICKEN SEZ).

Mattel Electronics™

BRAIN BAFFLER™



© 1980, Mattel, Inc., Hawthorne, California

Eight word and number games can be played on the BRAIN BAFFLER keyboard console, a device geared mainly for two-player competition. As is apparent from a glance at the BRAIN BAFFLER keyboard, this is a multi-game unit whose emphasis is on word games, many of which are thoroughly intriguing. A total of eight games can be played using the 44-button keyboard and the 8-character LED readout, and you will probably need a thorough reading of the instructions before you start (this is not one of those games where you noodle with the buttons until you figure out how it works).

Game #1, ANAGRAMS, begins as a player loads the game by pressing the *A/1* button on the keyboard. The first player then types a word (up to eight letters), presses *enter*, and sees *GO appear on the display, on the right-hand side. Player two now presses the *go* button (if the *GO appeared on the left side, player one would go) and sees a scrambled word which he decodes letter-by-letter while a clock ticks off seconds. If he's right, a fanfare sounds, and the complete word is shown on the display. If he's wrong, a series of sounds will tell him so, and the *GO will reappear on the display, inviting him to press *go* once again and see a new scramble of the same word. He may, at any point, decide to *give-up* by pressing the corresponding button, or he may re-scramble the word by pressing *refresh*, or he may request the first letter of the word (along with subsequent letters) by pressing the *buy* key. The game is scored by the number of seconds you needed to decode the word, and you'll find that the use of the *refresh*, *buy* and *give-up* keys will affect your score as well. ANAGRAMS is, as I said, a two-player competition,

and BRAIN BAFFLER keeps track of scores for both players. You can see the scores by pressing *score* at key times in the game. Low score wins.

BUILD-A-WORD, activated by pressing *game* and *B/2*, is a random electronic version of "ghost." A letter appears on the extreme right of the display, and it changes to another letter, then another, until one of the two players taps their *Player/Bonus* key. At that point, the letter becomes permanent, and a second letter starts randomly changing. The idea of the game is to build your own word, stopping the letter sequence in the most vexing possible circumstances (first an R, then an H . . . this is bound to draw a challenge unless your opponent is thinking of the word RHYTHM or RHYME). Specific keys are involved in the challenge sequence, which are detailed in the instruction booklet.

FLASH WORD shows a series of eight letters on the display, and changes one of the letters in the combination as play progresses. One of two players stops the action by touching *Player/Bonus*, and each continues to press that button one time for each letter in the longest possible word he sees in the random combination. Note that the letters themselves are not pressed here—only the *Player/Bonus* button. BRAIN BAFFLER's computer is not capable of judging the game, and so the players themselves, along with a dictionary, control the game. BRAIN BAFFLER only displays the letters. THIRD-DEGREE FLASH WORD, game *D/4*, follows the same rules, changing only the number of letters which change during the display sequence.

COPY THAT is a number game (which might have been more fun if played with letters), where a series of numbers is to be parroted on the keyboard after they're shown. The gimmick here is that players can control the number of digits (only 1–4 are used) on each turn. In this case, the game does judge right and wrong answers.

GO HANG! is hangman, played with words up to seven letters. The instructions promise "a delight for one or two players," but no single-player mode is available. The game is played by two players as follows: the first player enters a word, presses *enter*, and hands the game to the second player, who sees an appropriate number of blanks shown on the screen, alongside the number 8. Player 2 now has 8 chances to be incorrect in his quasi-logical guesses entered via keyboard. In this version, the computer will not subtract the same incorrect letter more than one time (an improvement over TI's SPELLING B). As in all games on BRAIN BAFFLER, the game is scored as a two-player competition.

The two final games on BRAIN BAFFLER are CONCUSSION I and CONCUSSION II, which are numerical variations on MASTERMIND. CONCUSSION I is the only one-player game on BRAIN BAFFLER, wherein the computer chooses the hidden combinations. The second CONCUSSION game allows player input of 4-digit combinations.

Many of the games on BRAIN BAFFLER are familiar, while others merely offer different (not necessarily better) versions of already available games.

The most important thing to remember about this unit is its versatility—there are at least 6 totally different games available on the single unit. And each one is a strong basis for mature two-player competition.

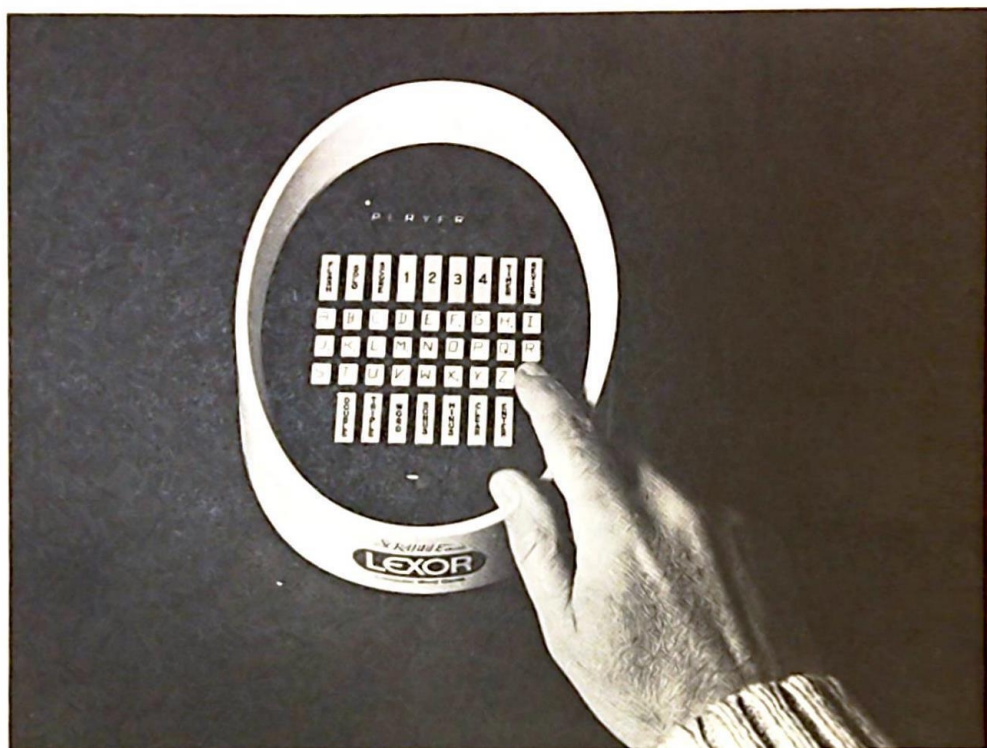
MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$40–\$45

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: • • • •

RECOMMENDATION: So long as you realize that all of these buttons don't indicate a full-blown computer with word-recognition capability, you'll be very pleased with the group of games offered by BRAIN BAFFLER. The game tested best with older children with a bent toward word games. Adults found the number of different buttons required for play a bit tiresome, but enjoyed the games anyway.

*Selchow & Richter™***SCRABBLE® LEXOR™
COMPUTER WORD GAME**

Unlike *SENSOR*, Selchow & Richter's first electronic word game, *LEXOR* really does duplicate the action of a *SCRABBLE* game, in somewhat modified form. It is played with a 26-letter keyboard on a rather futuristic console, and, like *SCRABBLE*, it begins with a rack of seven letters.

The object of *LEXOR*'s first game (there are three games) is to work a single rack of letters (shown electronically) trying to form as many words as possible within a time limit. There is a bonus for words of 5 letters and over. Each letter used carries its own score (H=4, Z=10, P=3, etc.) in this and every *LEXOR* game. This particular game, called *FLASH MODE*, is designed for two players, with one entering and the other challenging unacceptable words. *LEXOR* does not feature a dictionary of any kind—it merely displays random letters and keeps score.

In the *SOLO MODE*, *LEXOR* chooses seven letters (no blanks), and the player must use as many as possible in forming a new word. A second rack

appears, with all new letters, and the player reacts in a similar manner. There are fourteen racks in all.

The third mode is not a game at all. Instead, it is a scorekeeper, to be used in all of your future SCRABBLE matches. All you need do is to type the word, with appropriate double- and triple- letter and word scores, and the computer will tally your point scores. It will time each turn as well.

MANUFACTURER: Selchow & Richter, Bay Shore, New York

PRICE: \$40-\$50

POWER REQUIREMENTS: Four "C" batteries, or AC adapter

RATING:

RECOMMENDATION: A must for all SCRABBLE players.

Entex®

ELECTRONIC POKER

ENTEX ELECTRONIC POKER is a particularly good rendition of the betting man's favorite, five-card draw. The game itself is large (5 x 8 inches), and carries a split display, designed to show dealer cards on the left and player cards on the right. When the *DL* (deal) button is pressed, the display shows five cards in each area; the player cards are exposed, and the dealer cards are not. Cards are designated by the familiar seven-segment display, with one diagonal line added to show queens and unexposed cards. Suits appear directly above or below each digit. (The symbols are a little confusing at first, but everyone learns to accept them.) Take a good look at your hand—a queen and a five of clubs, and a two and a seven of spades, and a five of hearts, for a total of one pair of fives. Discard the queen, the seven and the two by pressing the buttons for those card positions (each *position* in your hand is numbered, regardless of the card which occupies it—so you discard your first card by pressing #1, your third card by pressing #3, your fifth card by pressing #5). Each of these discards flashes to allow a doublecheck, which you verify by pressing *GO*. Your new cards come up immediately, at random—jack of clubs, six of spades, queen of hearts, which still leaves only a pair of fives. The dealer's hand—at this point showing only the backs of cards—blinks the cards it has replaced.

It is now time to place the first bet—so press *BT* for bet, and enter your wager, anywhere from 1 to 9999 points. Let's bet 10 on our pair and press *GO*. The dealer sees that bet, raises it 1, and exposes only two cards—a jack of spades and a six of diamonds. You bet again, raising to a total of 20, which the dealer sees and raises again by 1 chip. He shows another card—the ten of hearts. Final bet now—let's go to 30. Dealer sees the bet, then shows his hand with a *pair* of sixes *and* a *pair* of tens. He takes the pot, we press *T* for the accumulated total of your winnings—down 30 points.

Keep at it—it takes practice to become a card shark.

MANUFACTURER: Entex, Compton, California

PRICE: \$30–\$35

POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING: * * * * ½

RECOMMENDATION: A wonderfully addictive game for adults who enjoy a nice blend of skill and chance. Once in the hands of a true fanatic, you may lose this person's attention for weeks!

*Mattel Electronics®***COMPUTER GIN™**

© 1980, Mattel, Inc., Hawthorne, California

GIN is a very different game as electronic hand-helds go, primarily because of the card display. The entire deck is etched into the liquid crystal display, with active cards "lit" during the game. Notice that there is no "bet" function on the Mattel version—this is a card game, not a betting game.

As in cards, we start with a deal. Eleven cards appear, one of which is flashing. You may either take the flashing card, or draw a new one. In any case, you must then discard, a process done by holding the *select* button, causing each card in your hand to flash, one at a time. When the proper card flashes, press *discard* and the card will drop out of sight.

The dealer, your opponent throughout, will either accept the up card by saying "thanks," or draw his own card—"no thanks."

The game continues until one player has gin, or when the dealer knocks. In the second circumstance, the player may then meld onto the dealer's hand.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: About \$50

POWER REQUIREMENTS: One 9-volt battery

RATING: * * * *

RECOMMENDATION: Be aware that there are two *different* versions of this game. The earlier version, used only in preliminary testing, features a less sophisticated game of gin, and a simple blackjack. Mattel reacted to the tests by redesigning the game, using the computer memory formerly devoted to blackjack to improve the gin game. It is now a very true rendition of the game. I only wish we could see the dealer's hand.

Entex®

JACKPOT GIN RUMMY & BLACKJACK



This is a full-feature game of gin rummy, including scoring, in a format first used for this company's POKER game. The card display looks rather like a calculator, with the usual numerical patterns for 1–9, "0" for the ten, "J" for jack, an "O" with diagonal slash for the queen, "K" for the king, and an "A" for the ace. Backs of cards look like queens, with an additional line through the center. These patterns are a bit unorthodox, but not very troublesome after the first few plays. Suits are indicated by small pips either above or below the value of each card.

GIN RUMMY is a ten-card game, and so it starts with a random deal of ten cards, plus one "up" card. First order of business is to arrange your hand—you'll find that card positions are numbered 1–10, and that you can switch any two cards in your hand by first pressing the position and then the **CH** button (change). Remember that you want either groups of the same value (three 10's, four 4's, three jacks, etc.) or runs of cards in the same suit (7–8–9 of hearts, 2–3–4–5 of clubs, J–Q–K of diamonds, etc.) or any combination of the two. You may also decide to Knock (to end the hand when your unmatched cards total less than ten points). Let's play out a hand.

Take a good look at the up card at the extreme right side of the display. If

you want it, press the number of the card you wish to replace, and then *CH*. If you don't want it, press *DR* (for draw), look at the new card, and either use it to replace another card in your hand, or let it go. The game continues this way until either you or the dealer declares *GIN!* (or knocks).

Scoring is based on the total value of the losing hand minus the total value of the winning hand. When either dealer or player knocks, the opponent may meld (*MD* button) cards against the hand used for knocking, to decrease losses, and possibly to undercut the knocked hand by showing a hand of sufficiently low point value. This is explained thoroughly in the game's instructions.

The dealer's hand will be displayed, incidentally, when you press *CH* after either a knock or a gin.

All gin games are played to a total of 100 points.

JACKPOT is not just a game of gin. There is a fairly basic blackjack game here as well. Unlike gin, this is very much the betting game, where the highest possible scores are the only goal.

To play BLACKJACK, slide the *BJ/OFF/GIN* switch to *BJ*. You'll hear the cards shuffle, and see two cards, facedown, dealt to player and dealer. Place a bet by pressing 1 to 999 on the keyboard, and confirm by pressing *BT*. Now press *GO* to see both of your cards, and the dealer top card. Press *HT* to hit, and *ST* to stand. Dealer stands at 17 or over. You may double down if your cards are of identical value, and you may split pairs if one comes your way.

Each deal is played to 21 points. The cards are shuffled after thirty-eight cards have been played. There is no insurance in this blackjack game.

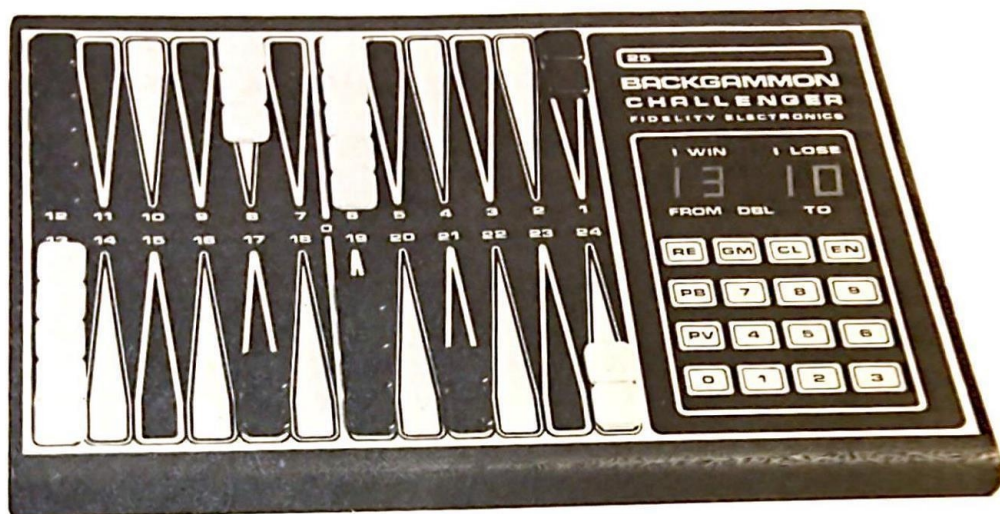
MANUFACTURER: Entex, Compton, California

PRICE: About \$40

POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING:

RECOMMENDATION: A good gin game, plus an adequate blackjack. Fun for adults, especially devout cardplayers.

*Fidelity***BACKGAMMON CHALLENGER®**

The game of backgammon, which involves the movement of checkers along a path of twenty-four points to a home base area, is a perfect game for play by computer. The reason why is as simple as computers themselves: the program tracks the number of black checkers and the number of white checkers on each of the twenty-four points (plus #25—the area used for bearing off, and #0, which is normally called the center bar). All the computer need do is to identify the checker being moved, and either add or subtract the number of blips on the die used to affect the move.

Backgammon aficionados will love BACKGAMMON CHALLENGER primarily because of its innate flexibility as to modes of play. The game itself offers both computing/calculator area and full-scale gameboard, all on one durable lap-sized unit. Feel free to handle the dice yourself, or to let the CHALLENGER's randomizing programs throw the dice for you. Each move is indicated by number (from position #13 to position #10), and multiple moves caused by doubles are made clear as well. All of the generally accepted strategies have been programmed into CHALLENGER, including the play of a running game, hit and run, blocking and bearing off games. His strategy varies game to game, assuring a partner of infinite imagination.

Specialty modes on this particular device include PV, for Position Verification, which tells you how many of whose checkers are currently located on each point, and PB, the problem mode, which can be used to set up mid-game situations for strategic practice. CHALLENGER keeps a close watch on every move, and will react abruptly if you enter an illegal move during the game.

For the gamblers among us, BACKGAMMON CHALLENGER offers a built-in doubling feature as well.

In general, BACKGAMMON CHALLENGER provides an intelligent opponent for totally manual play. The fact that this game is computerized does not indicate automated action—you must move each and every checker by hand, for yourself and for the computer. This has its positive effects, however, in that it forces beginners to pay particular attention to the board positions of every checker. The physicality of CHALLENGER, as opposed to the video versions of backgammon reviewed in a later chapter, allows more direct interaction with the game.

The only problem here is an unfortunately designed storage package, which almost guarantees the loss of custom-made checkers in all but the neatest households.

MANUFACTURER: Fidelity, Hialeah, Florida

PRICE: \$99.95

POWER REQUIREMENTS: No batteries, uses an AC adapter which is included in the package.

RATING: • • • •

RECOMMENDATION: Perfect for players of all ages; only the concept of reading the digital computer readout may prove confusing for the youngest players. *Note:* The computer programming in this game may occasionally display an impossible play situation. Be sure you buy the most updated version of all Fidelity products—they're getting better all the time.

*Tryom***OMAR™**

OMAR is named for master backgammon player/actor Omar Sharif. It is a calculatorlike device which is programmed to play backgammon, in much the same way as BACKGAMMON CHALLENGER (see preceding entry). OMAR is unique in that it is a hand-held computer, available in one of five different product formats. There are effectively two different OMARs—each identical except for the display (OMAR I and OMAR IV had LEDs—bright glowing red alphanumerics on a dark background, while OMAR II, III, and V have LCDs, or liquid-crystal displays, whose images are black on a silver-gray background). Tryom created the OMAR series as a packaging plan for retailers—all of the games are effectively identical. For the record, OMAR I, with its LED readout, is packaged with a nine-inch, magnetic portable backgammon set. OMAR II, with LCD display, is packaged “with a Deluxe Corduroy” portable backgammon set. OMAR III again offers the liquid-crystal display (which most people, incidentally, prefer, because the dice faces are more clearly displayed), this time with a fifteen-inch backgammon set. OMARs IV and V are

provided without any backgammon set at all. OMAR IV has LEDs, and V has LCDs. And there you have it.

But what of the game, you ask? It's easily played using a twenty-button keypad just below the display console. Most buttons are used to simply input your moves (a numerical code for each point on the board is used for entry, with twelve possible entries, and an arrow to indicate upper board—where the arrow points up, and a lower board, where the arrow points down.) Two dice flash on the right side of the display at random; to stop the dice, one presses the button imprinted with a die. To enter a move, or to see OMAR's moves, press *EN*, a.k.a. the *enter* button. A *VR* button is used to verify all board positions, again using the numerical codes and arrows for all information.

As with any electronic counting game, one must watch each and every move very carefully, for the computer cannot see what you are doing. A single piece in the wrong place, especially in a game like backgammon, could destroy the play of the entire game. OMAR, like the Fidelity Products, has not been perfect in this regard. It too is being improved with time.

MANUFACTURER: Tryom, Cleveland, Ohio

PRICES: OMAR I—About \$50

OMAR II—About \$60–\$65

OMAR III—About \$75

OMAR IV—About \$40–\$45

OMAR V—About \$55

POWER REQUIREMENTS: This varies per unit. All five games can be operated by AC adapter, included in all but OMAR V. The first four units use four "AA" batteries, but OMAR V uses a 9-volt instead.

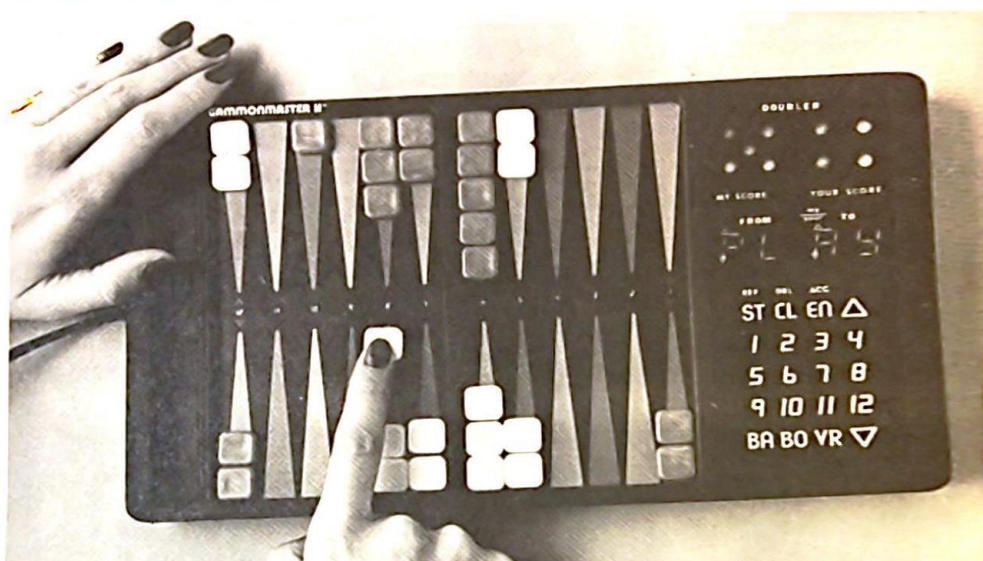
RATING: ***

RECOMMENDATION: Overall, OMAR is a reasonably durable backgammon set. The use of upper board and lower board is a bit confusing, especially since the official game is played with an inner board and an outer board. But the controls and the display all function quite effectively, and it does play a good game of backgammon.

You will find design flaws in both the Tryom and the Fidelity lines. Again, these games are being upgraded periodically, so be sure to buy the most recent model.

Tryom

GAMMONMASTER II™



Essentially an early version of OMAR fitted into a larger plastic backgammon board, GAMMONMASTER II offers the same sort of play sequences as OMAR.

GAMMONMASTER II physically resembles the Fidelity Electronics game called BACKGAMMON CHALLENGER, with two important design improvements in the physical game itself. First, large-sized electronic dice readouts make the game a bit more clear, and second, storage space is offered for checkers when not in use.

Tryom and Fidelity have created somewhat different versions of the same classic game. Each version has its advantages, but our tests seemed to favor the Fidelity game by a small margin.

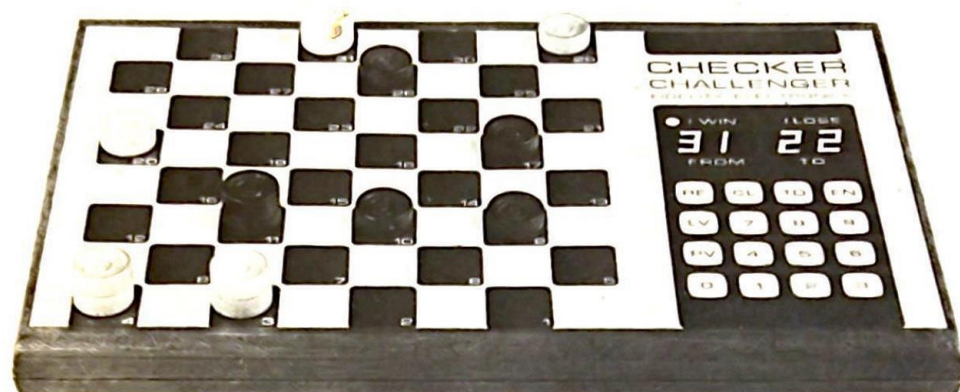
MANUFACTURER: Tryom, Cleveland, Ohio

PRICE: \$70–\$80 (Basic Unit); \$90–\$100 (with doubling program)

POWER REQUIREMENTS: AC only (plugs into wall)

RATING: * * *

RECOMMENDATION: Try both units in the store and see which one you prefer. This is a matter of opinion. (Gammonmaster II, incidentally, was the first backgammon game in release.)

*Fidelity***CHECKER CHALLENGER®** _____

The game of checkers was never a game that was played very seriously around my house. Since checkers involves only three simple rules (move one diagonal space on each turn; try to reach the opposing side of the board to “king” your player; you must “jump” over your opponent’s checker if the opportunity presents itself), it was always a game for children, and nothing more.

The game of checkers, and its electronic counterpart, CHECKER CHALLENGER, is hardly a children’s game. It is a serious strategic competition, played on one of two levels against a very smart computer. All dark squares on the checkerboard are numbered for identification, and the computer not only recalls the position of each checker on the board, but recalls which of the checkers have achieved “king” status as well. A calculatorlike keyboard allows human players to communicate with the computer, using board identification numbers as the common language (from 22 to 18, or in the case of a jump, from 26 to 19. A double jump is displayed as from 26 to 19—flashing—and 19 to 10). The computer follows every move with absolute accuracy, and even flashes an “I Win” light when it reigns victorious. A humble “I Lose” light flashes when the human player wins the game.

The layout of the game includes a plastic checkerboard with numerical imprints, and a specially programmed keyboard and display, also in the checkerboard unit. All computer inputs are touched-in manually (which is a good idea because it forces humans to play with computerlike accuracy).

MANUFACTURER: Fidelity, Hialeah, Florida

PRICE: \$65

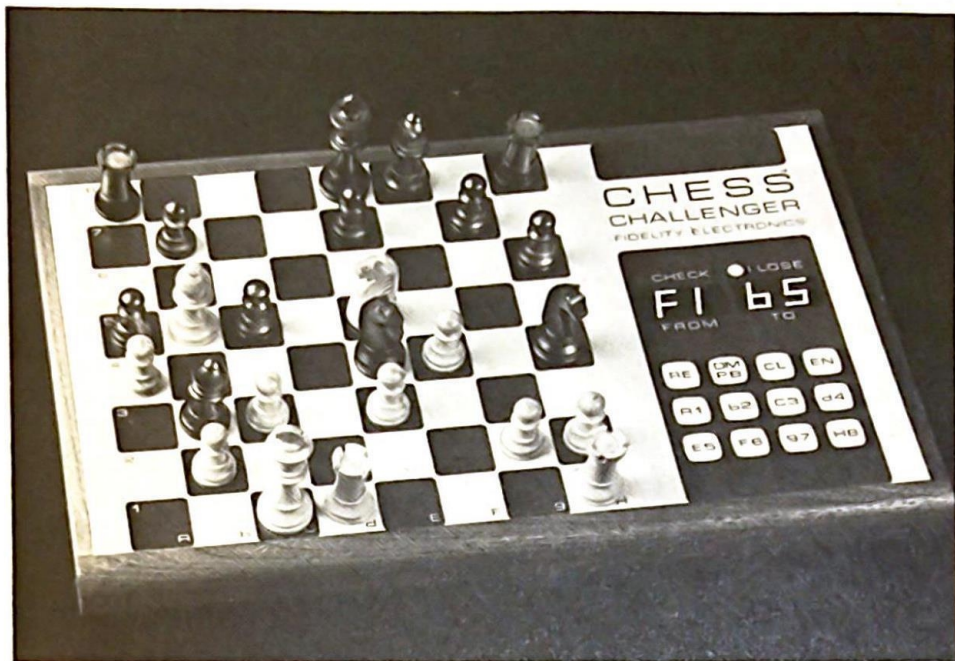
POWER REQUIREMENTS: AC only (adapter included)

RATING: * * *

RECOMMENDATION: If you like checkers, this is an excellent game. If you are not a checker player, it is unlikely that this game will change your gaming habits.

Note: The game includes a strategy booklet entitled "Checkers Secrets of the Experts."

Second Note: CHECKER CHALLENGER/4, priced at \$160 or so, has been discontinued.

*Fidelity***CHESS CHALLENGER® 7**

The layout here provides a durable plastic chessboard and a calculatorlike device on a single unit designed for single-player activity. The chessboard is numbered and lettered, and the computer uses a letter/number code to identify each move (AZ to AS, E4 to F6). All of the computer's moves are displayed in this format, and all of your moves are entered using this code as well.

CHESS CHALLENGER 7 can be played on one of seven levels, each linked to response time. The level of play can be changed at any time during the game. A problem mode allows you to preset board positions and either play them yourself or study the computer's strategies as it selects the best possible moves on the board. An override feature allows you to play several moves before the computer makes its move. You may also add or subtract pieces during the game in a "teach" mode. Pawn promotion, en passant captures and book opening are also standard. The computer varies its strategies, of course, in every game. With position verification, which tells you which piece is in which square on the board.

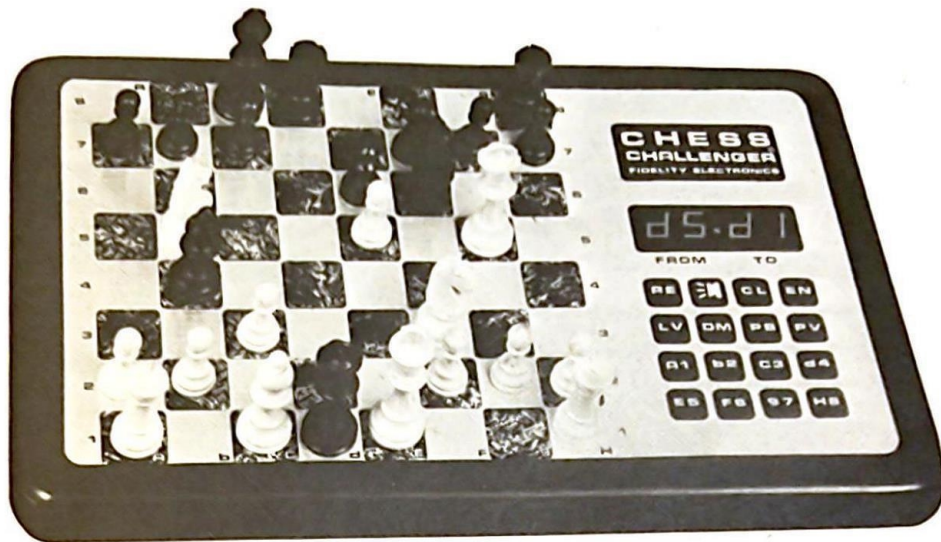
MANUFACTURER: Fidelity, Hialeah, Florida

PRICE: \$110

POWER REQUIREMENTS: AC only

RATING: * * *

RECOMMENDATION: The computer program plays a good game of chess, with a good group of features. The physical design does not allow for storage of pieces, which is an annoyance, though a minor one at that.

*Fidelity***VOICE CHESS CHALLENGER®** _____

A vastly improved version of CHESS CHALLENGER 10 (no longer available—it was a more powerful chess player than the CHESS CHALLENGER 7 now on the market), VOICE CHESS CHALLENGER comes packaged in an attaché case. It is played in much the same way as CHALLENGER 7, with a greater number of features available via more powerful memory. And, of course, there's a computerized voice, helpful in identifying which piece moved to which square, check and checkmate, and even the locations of every piece on the board.

VOICE CHESS CHALLENGER can be played at one of ten levels, which can be changed at any point in the game. Response time at the beginner level is five seconds; at the expert level, response time is eleven minutes. An "infinite" amount of response time can be entered as well, allowing the computer all the time it needs to search its memory for the best possible moves.

The game allows you (or the computer) to select any one of forty standard book openings for the game, and to continue in book pattern for as long as you like. Castling and en passant are in the program, but only to be used when clearly advantageous to overall strategy. Pawn promotion always results in the return of a queen, though you may program other responses via the problem mode. You may also move twice in a turn, setting better strategies as you go—the computer will help you to select your move in this or any other instance.

An extensive educational approach has been used in the writing of this computer program, so you'll find that recommended moves, proper use of book openings, and end game solutions are all part of the system. In the "infinite response time" mode, where the computer may take days to decide on its next move, you may interrogate as to its current thinking with the press of a button.

You can buy VOICE CHESS CHALLENGER with any of four languages—English, German, French, or Spanish.

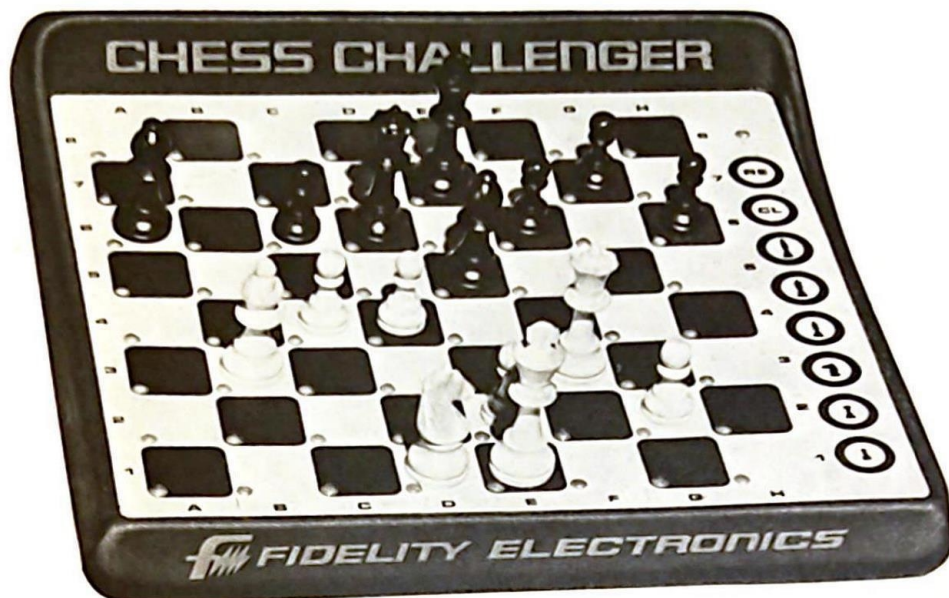
MANUFACTURER: Fidelity, Hialeah, Florida

PRICE: \$325

POWER REQUIREMENTS: AC only

RATING: * * * *

RECOMMENDATION: The SENSORY VOICE version (page 132) is much better, but this is a very good chess system.

*Fidelity***SENSORY CHESS CHALLENGER 8®** _____

Using the programming originally devised for CHESS CHALLENGER 7, this new version eliminates the rather tedious procedure of keying each and every move into the computer's memory. The gameboard itself is pressure-sensitive, so that a square responds to a touch identifying an active piece, and a second touch on the new square to verify the new position. Red lights on each square show the computer's moves.

The position verification routine has been totally redesigned for the new format as well. There are no numbered squares here. Instead, illustrations and pilot lights on each square provide instant double check of each board position.

MANUFACTURER: Fidelity, Hialeah, Florida

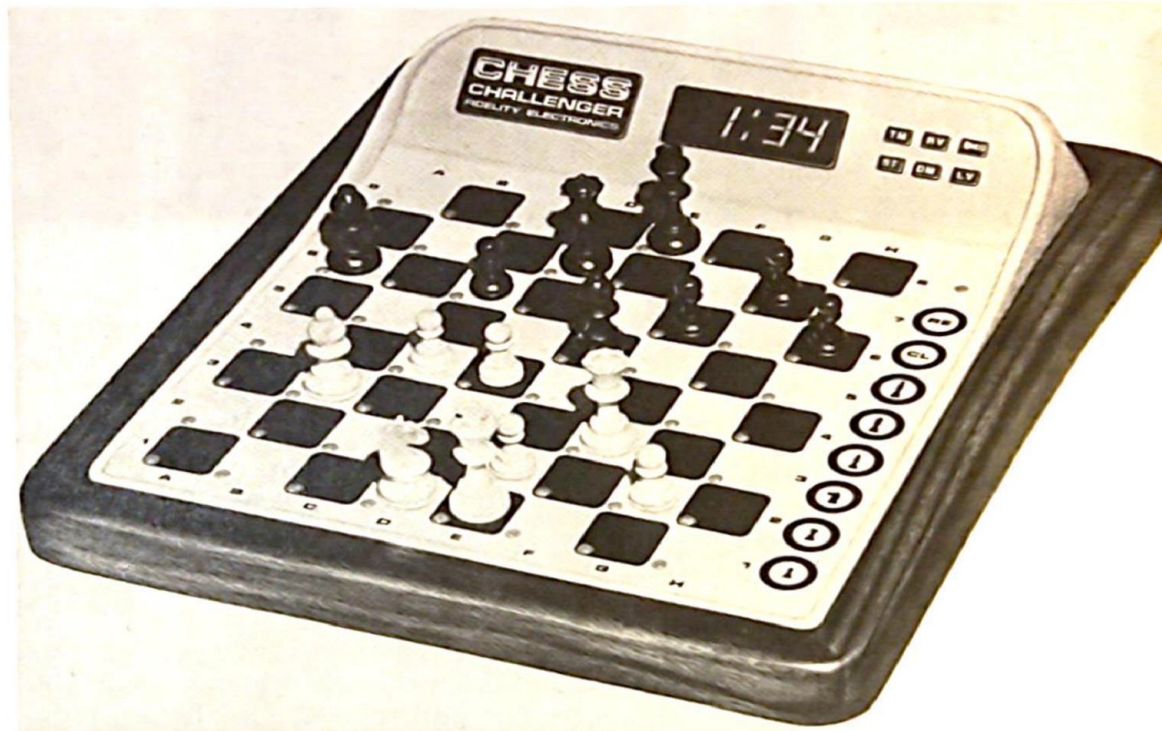
PRICE: \$150

POWER REQUIREMENTS: Four "C" batteries, or AC adapter

RATING: * * * ½

RECOMMENDATION: The elimination of that tedious data entry ritual is worth the \$40 investment.

*Fidelity***SENSORY VOICE CHESS CHALLENGER®**



Fidelity's top-of-the-line chess game is essentially a full-featured version of the relatively new SENSORY CHESS CHALLENGER game, with even stronger programming. Aside from a solid walnut housing, magnetized chess pieces and optional printer attachment, you'll find significant advances in the software which guides all computer movements. A built-in clock ticks off the time remaining for each player's move.

The sensory chessboard eliminates all data entry; the computer "moves" its pieces by first flashing an occupied square's indicator light, and then a light in an empty square. You respond by pressing on each square in your move, activating the sensors just below the surface of the board.

Nine levels of play, plus an infinite level which allows unlimited response time for either player, make this game the most advanced ever created by Fidelity's labs. Fifty vocabulary words are spoken to guide the action. The voice is especially helpful in the position verification mode.

There is an enlarged group of book openings available, along with sixty-

four complete games originated by the masters (Spassky, Fischer, Morphy, Capablanca). The game is designed for you to compete against either side in these games, and even score points if you select the move originally played by a master. It's a welcome addition to the package of features.

MANUFACTURER: Fidelity, Hialeah, Florida

PRICE: \$360

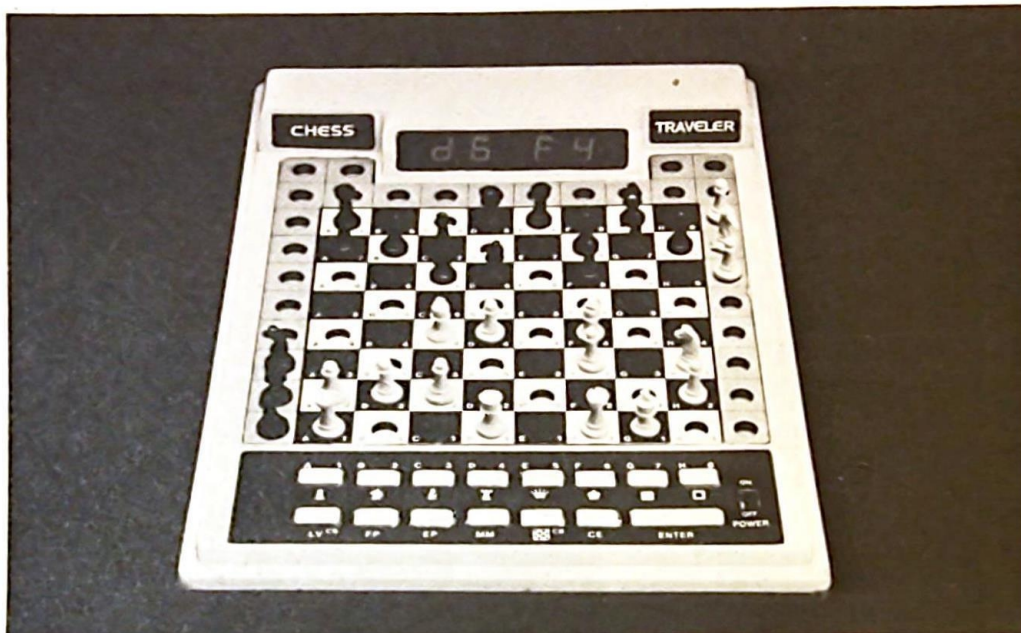
POWER REQUIREMENTS: AC only, but you can buy a special battery pack for portable use.

RATING: * * * * 1/2

RECOMMENDATION: This is the best Fidelity game on the market, substantially more powerful than either the SENSORY CHESS CHALLENGER or VOICE CHESS CHALLENGER alone. It compares with only one other game—the GRAND MASTER SYSTEM III by Tryom.

Tryom

CHESS TRAVELER™



A portable computer, several inches smaller than this book, is a full-featured miniature chessboard. Tryom claims that CHESS TRAVELER plays chess at a level competitive with Fidelity's CHESS CHALLENGER 7 game, with a more functional design. There are seven levels of play difficulty, each determining the amount of time allotted to the computer for calculating possible moves, and a problem-solving mode. Play levels can be changed during the course of the game.

All pieces, whether in play or captured, fit into the pegboard base of the game. A chessboard, with lettered/numbered squares, occupies most of the pegboard. Every move is keyed into the computer by identifying the square you presently occupy, and the square into which you are moving (e.g., D4 to D8). This data is displayed directly above the board. The computer communicates its moves on the display as well.

Features include a tutorial mode (where the computer plays against itself), prohibition of illegal moves, en passant, pawn promotion, mate in two moves, and position verification. Computer random action makes every game unique, as there are thousands of possible moves.

MANUFACTURER: Tryom, Cleveland, Ohio

PRICE: \$99

POWER REQUIREMENTS: Six "AA" batteries, or AC adapter

RATING: * * * *

RECOMMENDATION: An excellent portable chess, more than competitive for all but the best players.

*Tryom***CHESS SYSTEM III**



There are virtually no games currently available on the retail market that can compare with Tryom's SYSTEM III. The software design is superb, and the hardware system is simply beautiful. It is everything that an expensive special-purpose computer should be—and it fits into an attaché case!

CHESS SYSTEM III is a component affair, with a self-contained master device at its heart. This central console is the actual computing device, and various accessories can be plugged directly into special jacks, located on the sides of the console itself. Each game begins with a determination of time allowed to respond, to be set at any point between zero seconds (instantaneous response) and 100 hours. You then select your color (which you may, incidentally, change at any time during the game) and enter your opening move. You'll find several helpful design features will make the game seem very futuristic—the display shows a sketch of the piece in play, uses international symbols for capture, check, checkmate, draw, and stalemate, and shows suggested moves when requested to do so. CHESS SYSTEM III will allow you to back up through ten moves, so that you may study, or even change your strategies during the game, playing from either side.

Position verification, automatic execution of en passant, and castling, and various physical design niceties make the game even more appealing, especially if you play chess frequently.

The central console can be made more versatile with the addition of several accessories. A liquid-crystal chessboard which receives and displays all moves instantly can be hooked into the left side of the console. A printer assembly fits onto the right side. It displays lists of moves or if desired, illustrations of the entire board at any point in the game; these charts are great when used for analysis. A power pack allows two-and-one-half to five

hours of play without access to a wall outlet. The memory module is required to recall the ten most recent moves, and to store your current game for up to one full year.

This is an awfully powerful chess system, among the best available. In serious competition, however, you'll find that chess programs written for the new personal computers, whose memories are even more substantial, will be able to beat this game. Most other games will not.

MANUFACTURER: Tryom, Cleveland, Ohio

PRICES: Master Unit—\$225–\$250; LCD Chessboard—\$150–\$175; Printer—\$150–\$175; Memory—\$30–\$35; Power Pack—\$40–\$45; Master Unit, Chessboard, Printer, in a leatherette attaché case—\$550–\$650

POWER REQUIREMENTS: AC, or rechargeable power pack

RATING: ★★★★★

RECOMMENDATION: Treat this like any investment—spend some time working with this system at a store or hobby club before you buy, and ask your retailer about other, comparable units that may have appeared on the market in recent months. It is wise to shop around—especially in the largest cities—you may be able to find some handsome discounts. But you will not be dissatisfied with Chess System III.

*Fidelity***BRIDGE CHALLENGER®**

A handsome special-purpose computer which can be carried anywhere, BRIDGE CHALLENGER is one of the most complex electronic games yet devised. It is complex in regard to circuitry and computer memory, but remarkably easy to play. When you open the attaché, you will find a console packed with input keyboard and display lights, and two decks of specially marked playing cards. It isn't as hard as it looks, just follow the instructions, step-by-step, and you'll be playing computerized bridge in no time at all.

The first step is the choice of dealer. Press *DL*, and you'll see the North, East, South, and West, indicators light, one at a time. Stop the light at the appropriate indicator to choose the dealer for this hand.

Next, tell the computer which positions will be occupied by human players. The computer will play one, two, three, or all four hands if you like. Vulnerability and choice of conventions are the third and fourth presets—you may add to the Stayman, Gerber, and Blackwood conventions with 5-card Majors, a Weak 1 No-Trump Opener, a strong 2-Club Opener, Jacoby transfers over 1 No-trump opening, Baron Replay to No-Trump opening, or Strength of 2 No-Trump Response.

After setting these standards of play, the word "cards" will appear on the readout. It is time now to deal four hands, and to pass each of them over a scanner, which reads the markings of each card in precisely the way a modern cash register reads price codes from grocery items. Each card must then be placed in a specific position on one of four mats—this is a long, tedious ritual, but it's the only way yet invented to tell the computer about the cards in each hand.

Bidding is the focus of BRIDGE CHALLENGER, and the game is programmed to react to the essentials set forth in American Standard, ACOL, and various European systems. The machine is good at the bidding game (and becoming even better as it evolves—see recommendation), allowing doubles and redoubles via special key entry. A 38-page booklet, entitled "The Bridge Challenger Bidding System," outlines Fidelity's commitment to high-level play, as it thoroughly details evaluation of hands, opening bids, appropriate replies, intervention bids, overcalls, reopening bids, and penalty doubles, as well as second replies and slam bids. While there are subtle imperfections, this bidding system is a good one, more than adequate for all but the finest players.

The contract is finally won by one side or another, and play begins. But first—the dummy hand must be rescanned by the BRIDGE CHALLENGER, if the dummy is human. This is again tedious, but an apparent necessity in the play of the match.

Scoring follows the rules of Rubber Bridge. The number of tricks won is first displayed, followed by the contract, and the number of tricks made over book. The instructions further explain how match scores are accumulated over an entire game.

You may decide to replay any hand, even going so far as to change the human/computer status of the hands (the computer will not cheat—it will forget the cards it has already seen, automatically). There is a Bridge review function as well, which will run through all bids or all tricks, depending upon the phase of the game.

BRIDGE CHALLENGER comes with two decks of specially marked cards, and three mats with thirteen numbered card positions, used by the computer to identify cards to be played for each trick. Plan to use an entire bridge table to play the game.

MANUFACTURER: Fidelity, Hialeah, Florida

PRICE: \$350 (see below)

POWER REQUIREMENTS: AC adapter, or optional battery pack

RATING: * * * *

RECOMMENDATION: The original BRIDGE CHALLENGER, described above, did not play as well as it promised, and so Fidelity revamped the entire program, added a voice, and released VOICE BRIDGE CHALLENGER, to replace the old unit in the fall of 1980. The new game is identical in play features to this one, but the actual strategies involved are vastly improved. You can have your original unit modified by Fidelity for about \$100. Or you can buy a new VOICE BRIDGE CHALLENGER for \$370. The new version, incidentally, is strictly a * * * * affair; it's terrific! Fidelity also plans to sell a BRIDGE BIDDER, which concentrates on the bidding process. Consult your local retailer for more information.

CHAPTER 3

Action Games

Depending upon your imagination—and the size of your wallet—this next group of games may lead you through the perils of an African safari, the rigors of a space battle, or the mucky terrain of a tank skirmish. All of the games in this chapter are full of action, requiring fast reflexes and sharp strategies.

You will find some sports games here, some war games, and some games that simply refuse to fit into any other part of this book. Particularly popular is Entex's SPACE INVADERS, based on the popular video game of the same name. The British are particularly fascinated with a similar game that Vanity Fair sells here as ELECTRON BLASTER.

There are two types of action games in this chapter: games whose electronic controls simulate action on a display screen, and games that actually involve physical action. A visit to any toy store will show that there are many more of the second variety—from radio-controlled gliders to tanks that can be programmed to do the cha-cha. I've limited the second group because I believe that this is a book for game players, as opposed to people who are fascinated by items that might be labeled "toys" or "sporting goods."

Mattel Electronics®

ARMOR BATTLE™

© 1980, Mattel, Inc., Hawthorne, California

Like most of Mattel's hand-held games, ARMOR BATTLE is well designed, durable, easy to learn, and fun to play. It is an entertaining little diversion that will keep even the most aloof adults content for hours. ARMOR BATTLE is a tank game, but it's really an electronic game of tag.

The playing field consists of a grid of twenty boxes (five across, four down), and in each box fits the image of a tank. As we start to play, four invisible mines are buried in the grid. A steady tank-shaped blip appears in the lower right corner; a flashing tank appears near the upper right. Your tank is the steady one; the enemy flashes constantly. Using four arrow buttons, you move your tank up, down, right, and left in an effort to occupy any of the spaces adjacent to your enemy. At the instant you reach that spot, you press the fire button (located on the left side of the game) *at the same time as you press the direction of your fire.* (Actually, it is best to press the fire button an instant before you press the one for direction, because a slight miscalculation

may cause your tank to move into enemy territory before firing). It is best to waste as little time as possible once you are in position, because the enemy will initiate fire at you if you wait more than two seconds.

Enemy fire and encounters with mines (the mines have a peculiar sound, so you know where they are, even though they're invisible) return your tank to its starting position which costs valuable time. Time is what ARMOR BATTLE is all about—the object of the game is to blast as many enemy tanks as possible within ninety-nine seconds. Tanks appear one at a time, and so you must destroy one tank before another one appears.

MANUFACTURER: Mattel, Hawthorne, California

POWER REQUIREMENTS: One 9-volt battery, no AC adapter

PRICE: About \$20–\$25

RATING: * * * 1/2

RECOMMENDATION: Children, who seem to be a little less critical of game flaws than adults, seem to love this game. Adults will find that a minimum of skill is required to master the game, and so it becomes a matter of love and addiction for returning players.

*Mattel Electronics®***SUB CHASE™**



© 1980, Mattel, Inc., Hawthorne, California

SUB CHASE is a target game of sounds and moving blips, but the gimmick here is that your blip is a destroyer roving the seas in pursuit of a submerged enemy submarine. You can't see the sub (it is underwater), but your sensors can detect sound waves emanating from down below. As the beeping of the sound waves becomes faster and faster, you realize that you are very near the enemy. When you are directly above the ship, drop one of thirty depth charges and try to bomb the sub.

The sub also attacks, so be on guard—at random intervals, it'll fire rounds of torpedos, and will attempt to end the game by wrecking your destroyer.

Four directional buttons allow movement of your ship through twenty-one sea territories. Use the buttons to search out enemy territory (if a sub is within range of sonar, you'll hear beeps; if no sub is in sight, the territory will be silent), and to avoid torpedos.

As for scoring, a direct hit on first depth charge is worth five points, on second depth charge, three points, and it declines from there.

MANUFACTURER: Mattel, Hawthorne, California

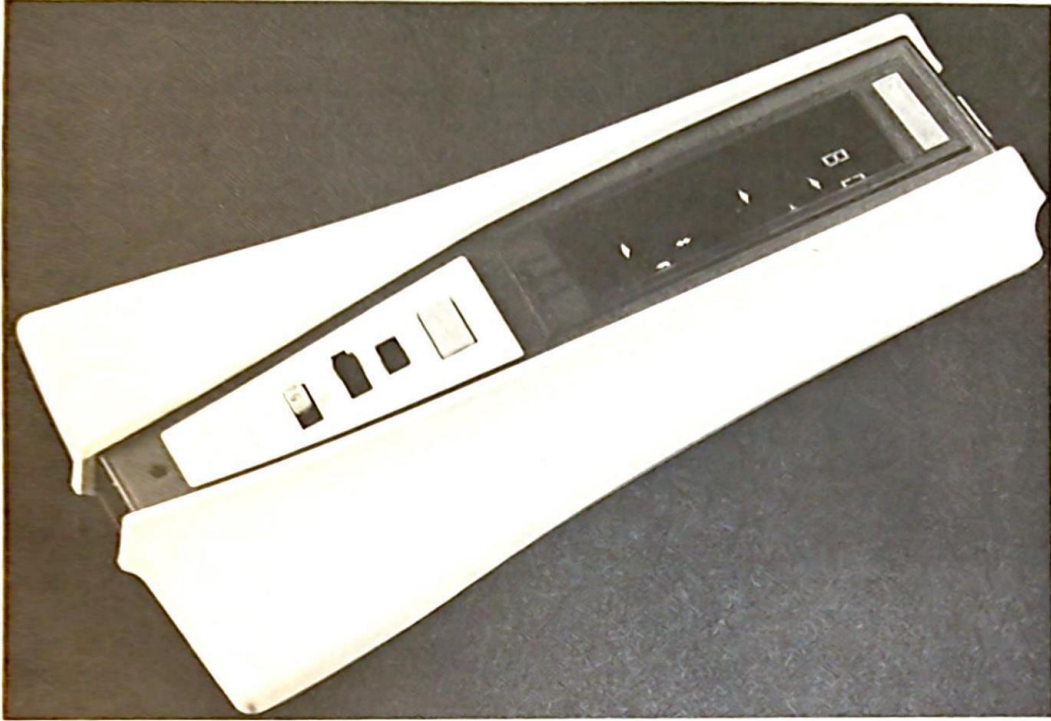
PRICE: \$20–\$25

POWER REQUIREMENTS: One 9-volt battery, no AC adapter

RATING: * * *

RECOMMENDATION: Not one of the more intriguing electronic handhelds, but certainly an interesting diversion. Children seem to find more fun in this game than do adults.

*Bambino™***UFO MASTER-BLASTER STATION™**



Designed to look like an implement of space travel, this space station plays a game similar to the SPACE INVADERS battle, with an entourage of enemy UFOs attacking a missile base. The playing field is long and narrow, and the invaders are sufficiently large to play under any circumstances. Each match begins as a UFO floats down toward the base from the top of the screen, shifting between one of three invisible columns as it comes near. Using a three-way joystick to maneuver your launch between these invisible columns, you must *fire* when the UFO is within range. The earlier you hit the UFO, the more points you score. And if the UFO manages to steer clear of all of your shots (it doesn't try very hard to do this, even at the most difficult skill levels, but it does occur), your missile base is destroyed, and the game is over.

The speed with which the UFOs approach is determined by a three-way switch at the base of the game.

MANUFACTURER: Bambino, Los Angeles, California

PRICE: \$35-\$40

POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING: * * *

RECOMMENDATION: A boredom factor may set in for adults early on; children will love this, though.

Entex®

ELECTRONIC SPACE INVADER™



Based on the extraordinarily popular video arcade game of almost the same name, SPACE INVADER is an outer space target battle of a most enticing variety. The game itself is very simple—you move your missile base back and forth to dodge the bombs being dropped from the bank of invaders located directly above your base. At the same time, you shoot up at the invaders, hoping to pick them off one by one. (A more complete explanation of the video SPACE INVADERS game appears in the final chapter.)

This is a good target game, but it lacks many of the intricacies offered on the video version of the game. The major differences involve the way that the

ships move—in the video version, the most significant movements are quite subtle, where this LED version allows only the broadest strokes. This handheld game, and the other SPACE INVADERS adaptations, are fun to play, but the video versions (see page 256) are simply better games. With two play speeds.

MANUFACTURER: Entex, Compton, California

PRICE: \$30–\$40

POWER REQUIREMENTS: Six “AA” batteries, or AC adapter

RATING: * * * (a noble effort)

RECOMMENDATION: This is fun to play, but, again, the video versions are stronger.

Bandai Electronics™

SUPER GALAXY INVADER™



This is another small-scale version of SPACE INVADERS, played on a larger field than the Epoch game provides. SUPER GALAXY INVADER again pits a cluster of alien attack ships against a missile base which is armed with 10 missiles. Since the cluster of invaders is smaller and the playing field larger, there is room for some interesting movements. When combined with a progressive speed-up feature, these movements make for an addictive game indeed.

Easy to play with only two manipulation buttons (a missile base *left/right* button and a *fire* button), SUPER GALAXY INVADER's physical controls are unfortunately a bit sluggish. If you pay attention, you can win this game, and when you do, you can further increase your score by facing new clusters of

invaders. The game becomes progressively more difficult with each new set of invaders as the result of a speed-up factor and a certain amount of fatigue. It's fun to play, fun to win, and an interesting challenge, even though it lacks many of the fine points that make the video game so very intriguing.

MANUFACTURER: Bandai, Secaucus, New Jersey

PRICE: About \$40

POWER REQUIREMENTS: Six "AA" batteries

RATING: * * * ½

RECOMMENDATION: For all ages.

*Bandai Electronics™***SPACE CHASER**



You are the pilot on an enemy bombing raid in this uniquely styled hand-held arcade game. The idea of the game is familiar, especially to those who spend their time piloting airships and raiders in the coin-operated arcades. Using an eight-position "action control button," which allows the readout screen to create the image of a ship moving up, down, right, left, or anywhere in between, the pilot attempts to maneuver enemy ships into a special target position marked on the readout. And when the ship is in range—*fire!*

This target format is common in the coin-operated arcades, and surprisingly uncommon in hand-held games. SPACE CHASER's readout screen is a little too small and even a little blurry because of an internal mirror system (you don't look directly at the screen—you see it at an angle). Its controls are not as well situated as they could be, and not as responsive as they must be in a good target game. But there's a grand idea beneath it all.

MANUFACTURER: Bandai, Secaucus, New Jersey

PRICE: \$19.90

POWER REQUIREMENTS: One 9-volt battery

RATING: * 1/2

RECOMMENDATION: You'll go cross-eyed if you play this for very long; there are some serious design frustrations built into a potentially good game.

*Bandai Electronics™***MISSILE INVADER**



This is a pocket-sized version of Bandai's SUPER GALAXY INVADER. Because of the smaller size it loses some positive features of its big brother in the translation. There is only one alien ship jiggling back and forth across a playfield, but it seems to be shooting off its bombs almost all the time. Most of the human player's time is spent merely dodging bombs and occasionally scoring lucky hits on the UFO, which gently floats at the top of the playing field at odd intervals.

The best possible score here is 245, based on an enormously successful raid using your fifty missiles to hit the ideal combination of the UFO (five points) and the Invader (one point). Unlikely you will score even half that without an awful lot of practice.

MANUFACTURER: Bandai, Secaucus, New Jersey

PRICE: \$25-\$30

POWER REQUIREMENTS: One 9-volt battery

RATING: •

RECOMMENDATION: Buy the bigger version; it is more fun to play.

Bambino™**SPACE LASER FIGHT™**

Unlike so many of the space games on the market, SPACE LASER FIGHT is a one-on-one duel between two robots armed with laser beams. It's a little like fencing from a distance, and a lot like the Bambino boxing game, which is available in the same housing, with many of the same controls.

Each robot has two strategies at his command: the ability to stoop, stand straight, or leap into the air, and the ability to shoot lasers from one of three positions. The former grouping is used for dodging on coming beams, while the latter is used to attack.

The match begins with each robot in position, ready to shoot. You'll quickly find that your controls can only be used in certain combinations—from the "jump" position, for example, you can shoot only high or medium lasers. Fast fingers will allow the best players to change positions quickly, so that offensive and defensive actions are used in concert with one another.

Each player robot is equipped with thirty laser beams at the start of the bout, and the game ends when *both* robots have exhausted their ammunition.

A random obstacle, rather like a shield, appears throughout the game in either high, medium, or low positions.

Scoring is based on the number of hits to the head, mid-section, and legs placed successfully. For one player versus the computer, or two players.

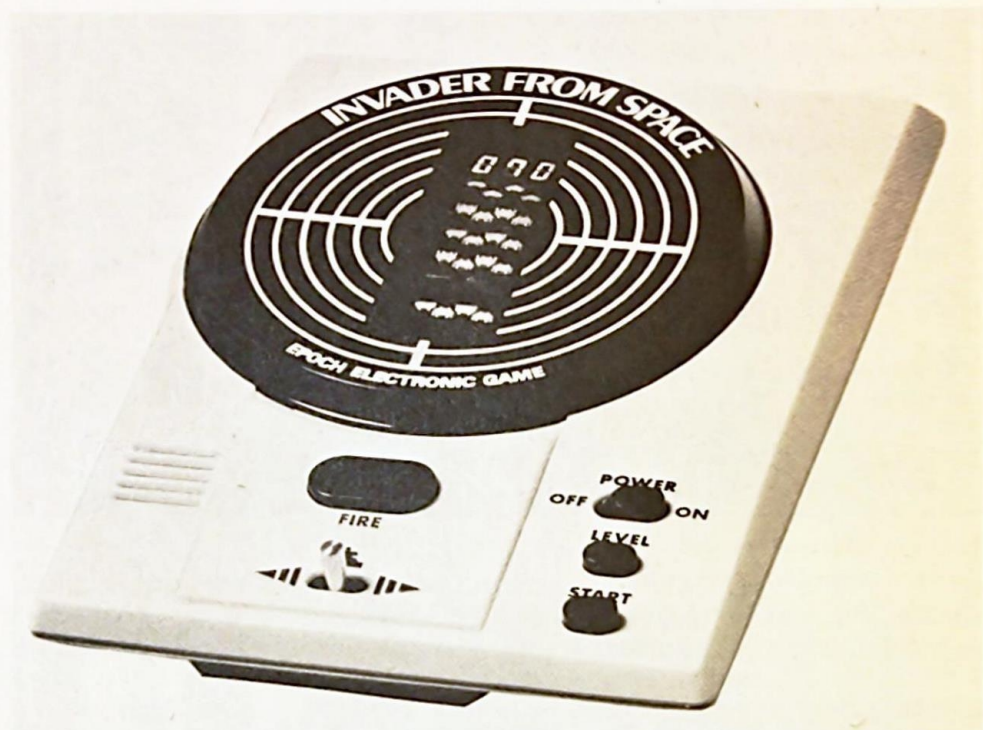
MANUFACTURER: Bambino, Los Angeles, California

PRICE: \$50-\$60

POWER REQUIREMENTS: Four "C" batteries, or AC adapter

RATING: ***

RECOMMENDATION: Fun to play, but a little too similar to the BOXING game. Buy one or the other, but not both.

*Epoch***INVADER FROM SPACE**

This adaptation of SPACE INVADERS offers many of the points that make these intergalactic games so appealing, and a small playing field which simplifies the game enormously. At the top of the rectangular playing field flies first one, then four glowing blue "invaders" which move as a group from left, to right, to left, to right. The screen then adds another row of four invaders from the top, then a third, and a fourth, and so on. At the bottom of the screen is your missile base, which is bombed by the invaders up above. You can move your missile base from left to right with a small joystick, and you can return fire by pressing a *fire* button. You'll find that as the game progresses, the invaders will march down the screen toward your base, and that the invaders closest to the base are worth the most points when you hit them.

Scoring and game progress are adjusted to the number of hits successfully placed by each side. The computer always controls the invaders, and you always control the base. The computer also randomly flies a UFO above it all which you can try to hit for bonus points; it is a direct adaptation of the video original.

MANUFACTURER: Epoch Playthings, Englewood, New Jersey

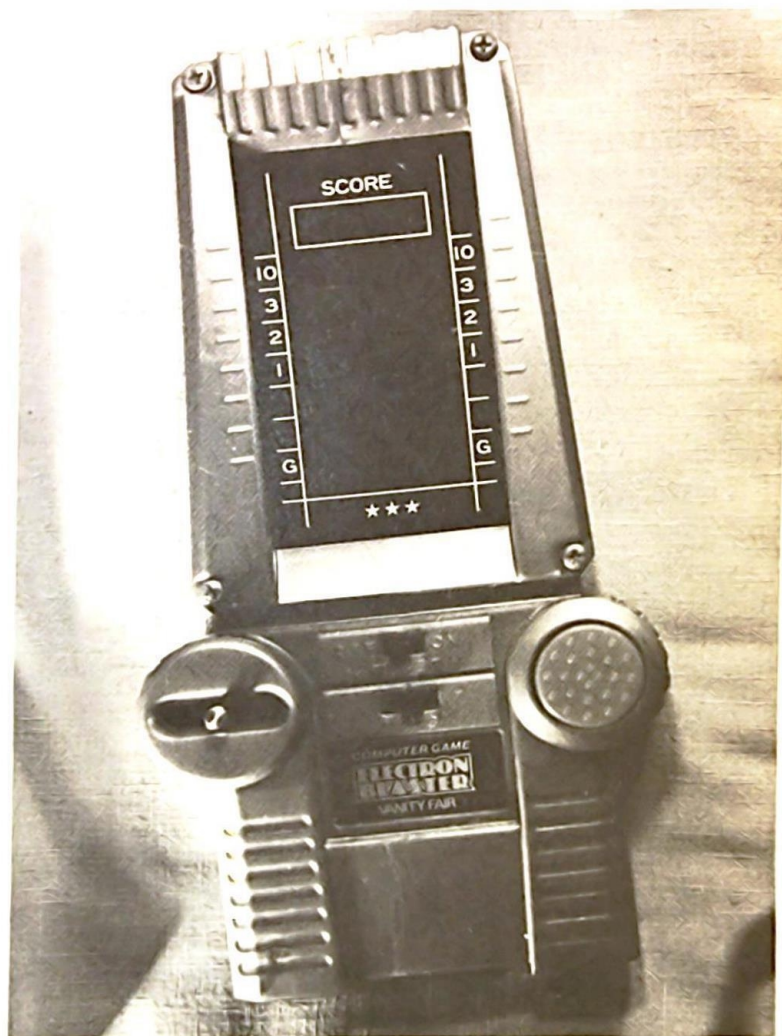
PRICE: About \$35

POWER REQUIREMENTS: Four "AA" batteries, or AC adapter

RATING: * * * ½

RECOMMENDATION: A slight design flaw occasionally ends games prematurely, but aside from that, this is an exciting version of the video game. It's great for kids. The game is lots of fun, especially as a hand-eye coordination exercise.

*Vanity Fair***ELECTRON BLASTER**



Another SPACE INVADERS variation, this one is rather neatly designed as a robot-type plastic case, with large, easy-to-use controls and one of the clearest, brightest, and best displays I've seen in an electronic game. Three columns of alien ships bomb your base station, which is moved out of the way of each bomb with a small joystick. Shoot back at the invader force by pressing the large red *fire* button, and score the best possible point values by

spotting the enemy ship early—the higher the target when you hit it, the more points you will score.

Your missile base will reappear two times after it is either hit by a bomb or displaced by an alien ship which manages to float down to base level.

For one player, with three skill variations all based on speed of play.

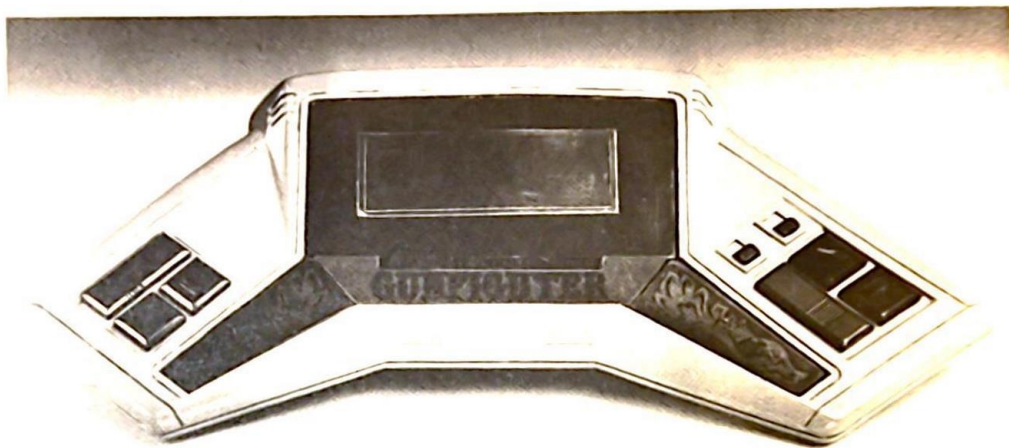
MANUFACTURER: Vanity Fair, Melville, New York

PRICE: \$30

POWER REQUIREMENTS: Four "AA" batteries

RATING: * * * ½

RECOMMENDATION: Still a simple version of SPACE INVADERS, but easier to play than most of the available variations.

*Bandai Electronics™***GUNFIGHTER**

Based on the arcade game, this is a shoot-'em-up game. It begins with a cowboy on each side of the display, with an occasional covered wagon riding through the cactus patch at center screen. Cowboys can, of course, shoot at one another, using an up or down button to evade shots, or to position for an attack. Once a cowboy is shot, a funeral march plays and the game is over.

MANUFACTURER: Bandai, Secaucus, New Jersey

PRICE: \$40–\$45

POWER REQUIREMENTS: One 9-volt battery

RATING: ***

RECOMMENDATION: Give it a try—for ages eight and up.

Coleco

ZAP!™



Product of Coleco Industries, Inc.

On the theory of "simple is best," especially for the younger children, Coleco designed one of the simplest electronic games of all. This is a game of reaction—when you see a light coming your way, tap the button in front of you. A green ball of light starts at what amounts to center court, and without warning, it shoots toward either one of the two players. Once the light starts coming your way, tap your *Zap!* button (don't press it, tap it, because it reacts when you *lift* your finger, not when you press down). If you act fast, the ball will start moving toward your opponent, who will react by tapping his *Zap* button and send it back to you.

You'll notice that there are three numbered lights in each player's field. This can be, and usually is, used as a strategic element. The longer you wait to return the ball, the faster it will travel toward your opponent. But there is a danger—if you wait until the ball reaches your #2 or #3 area, it is coming very close to your goal; you must react judiciously before you yourself are zapped.

Kids *a/ways* beat their parents. Try it.

MANUFACTURER: Coleco, Hartford, Connecticut

PRICE: About \$15

POWER REQUIREMENTS: One 9-volt battery, no AC adapter

RATING: ★ ★ ★ ★ ★

RECOMMENDATION: Great game for kids, who'll probably love it and then get bored and forget about it (you know how kids are. . . .). Try it with one player, with one hand on each control—it's quite a feat of coordination.

Note: Coleco is dropping this item from the line, but it is good enough to try and track one down. It's really a lot of fun.

Parker Brothers™

WILDFIRE™

While it is true that the large-scale game of pinball has yet to be duplicated in hand-held electronic form, Parker Brother's WILDFIRE is a noble effort. Both silver ball and flippers (WILDFIRE has two players) have been adapted for electronic play as custom-shaped red blips, as have the various bonus gates, kickers, and bumpers. There are a good many pinball-like scoring gimmicks and gadgets on this table but, alas, only the mechanics—and a small dose of its spirit—are reproduced even in this, the best of the electronic pinball hand-helds.

The game itself is about the size of a paperback best seller and about as thick. There are two flipper buttons (also used to set the ball's speed and the number of players in the match), and a ball release, whose touch can be timed to roughly control the ball's initial power. It all begins as you shoot off a red blip, which bounces about from bumper to bumper, scoring points as it makes contact with each point. There's a "kicker," which pinball fans know as a ball-drain, which has been fixed to bounce (kick) the ball back into play.

This is turned on and off by making contact with a target. There's also a bonus area called the Cave, which is entered only with expert flipper capability (or a lot of luck). A Tilt kills the ball if you are playing too fiercely (read that as two flips per second—too fast for what the machine considers to be "normal play"). Score is kept in thousands on an indicator for one to four players simultaneously (on one readout—the scores are sequenced). The indicator keeps track of the player at bat, and counts the number of balls played.

MANUFACTURER: Parker Brothers, Beverly, Massachusetts

PRICE: \$30–\$35

POWER REQUIREMENTS: Six "AA" Batteries, or AC adapter

RATING: * * * ½

RECOMMENDATION: Ages seven to adult is reasonable, with probable boredom factors with the older set. There just isn't enough magic here for the long haul.

Entex®

RAISE THE DEVIL™ PINBALL

As electronic pinball games go, this is better than most. It all starts with the *shoot* button, which causes a red ball of light to travel up the ball path. The ball then travels through the playing field, which is in fact a matrix of lights which glow when the "ball" occupies one particular spot on the board. The ball moves from bumper to bumper, making all sorts of noises as it scores points. One can truly "Raise the Devil" and score lots of points by hitting the bumper at his nose.

The flipper action is clean, accurate, and requires a little practice for those who tend to drain their balls too easily.

Each game is played with three balls, whose total score is tallied on a digital scoreboard. Four skill levels affect speed.

MANUFACTURER: Entex, Compton, California

PRICE: \$40–\$45

POWER REQUIREMENTS: Three "AA" batteries, or AC adapter

RATING: * * *

RECOMMENDATIONS: As good as any of the pinballs on the market. It's simple, unpretentious, and delivers all it promises.

*Castle***KINGPIN II™ ELECTRONIC PINBALL**

Children might enjoy the simplicity of this two-flipper, two-bumper, hand-held version of pinball. The object of the game is to flip your ball to hit one of the bumpers, which is the only way to score. The problem with the game, and the reason why adults will not take it very seriously, is that *all* that happens is that you flip the flippers, and you hit the two bumpers. The sensors and the scoring are both electronic, but the game is basically manual.

MANUFACTURER: Castle, Newport, Rhode Island

PRICE: \$20-\$25

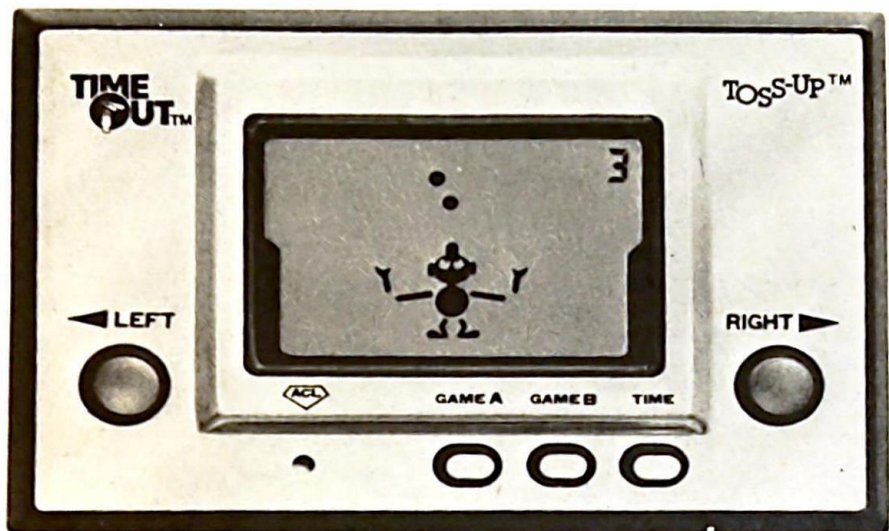
POWER REQUIREMENTS: One 9-volt battery

RATING: *

RECOMMENDATION: Perhaps for young children, no challenge for the rest of us.

Mego Electronics®

TIME-OUT™ TOSS-UP™



The first of the new small-format liquid crystal games were released by Mego Electronics during the summer of 1980. Measuring roughly the size of a credit card, and featuring wonderful animated displays, the TIME OUT games all feature cartoon characters hard at work in some oddball occupation.

Each game has a built-in quartz clock as well.

TOSS-UP is a juggling game. It stars the only electronic juggler I've ever seen. You play Game "A" by controlling the juggler's hands—moving them either right or left in order to keep two balls in the air at all times. When a ball is dropped, the word "Crush" appears, and the game is over. The number of successful juggles appears throughout.

Game "B" is faster, and it requires the juggling of three balls.

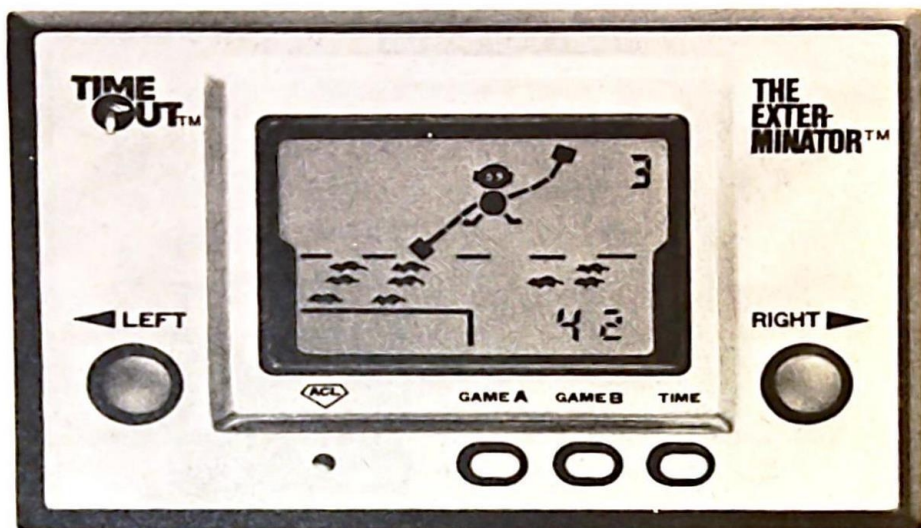
MANUFACTURER: Mego, New York, New York

PRICE: About \$50

POWER REQUIREMENTS: Two LR 43s or SR 43s (they're special batteries that can be bought at a camera store or jewelry store. They last six months.)

RATING: ★ ★ ★ ★

RECOMMENDATION: Lots of silly fun, for hours—and small enough to carry in your pocket.

*Mego Electronics®***TIME OUT™ THE EXTERMINATOR™**

A game of clubbing cartoon rodents must be the most arcane game ever created for the electronic medium. In the first game, the rodents (called moles) try to wiggle their way through cracks in the floor, while you control the action of the exterminator's hammers with a left and a right button. The second game is faster, with an additional crack in the sidewalk. Each mole is worth one point.

The game ends when three moles have made their way through the floor's openings.

With quartz clock.

MANUFACTURER: Mego, New York, New York

PRICE: About \$50

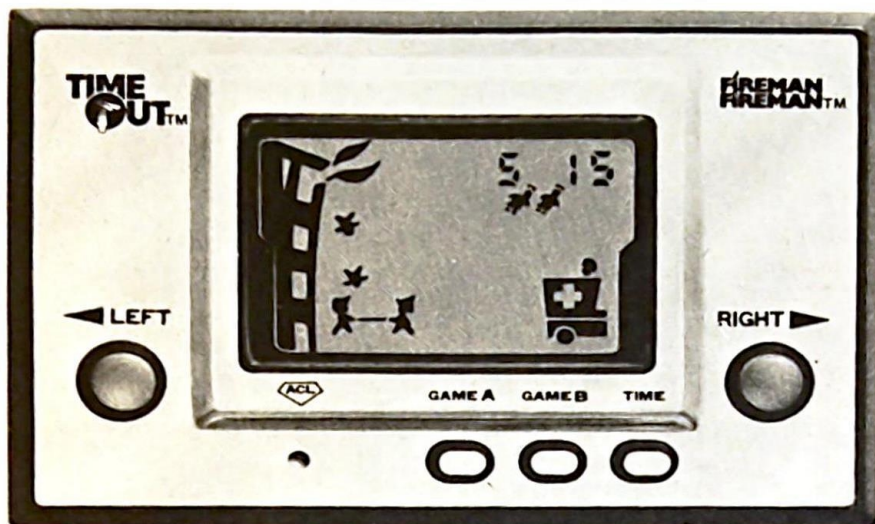
POWER REQUIREMENTS: Two LR 43s or SR 43s (buy at camera or jewelry store)

RATING: * * * *

RECOMMENDATION: Certainly the most deranged game available—and somehow lots of fun because it's so strange.

Mego Electronics®

TIME OUT™ FIREMAN, FIREMAN™



The folks who are designing these TIME OUT games have a very peculiar outlook. This one allows you to control a stretcher, located outside a burning building. Five people jump at once, and you've got to move that stretcher left or right, trying to save as many lives as possible. Each time you miss, the jumper crashes and reappears as an angel. Three angels and the game is over.

A second version of the game lets nine people jump at once.
With quartz clock.

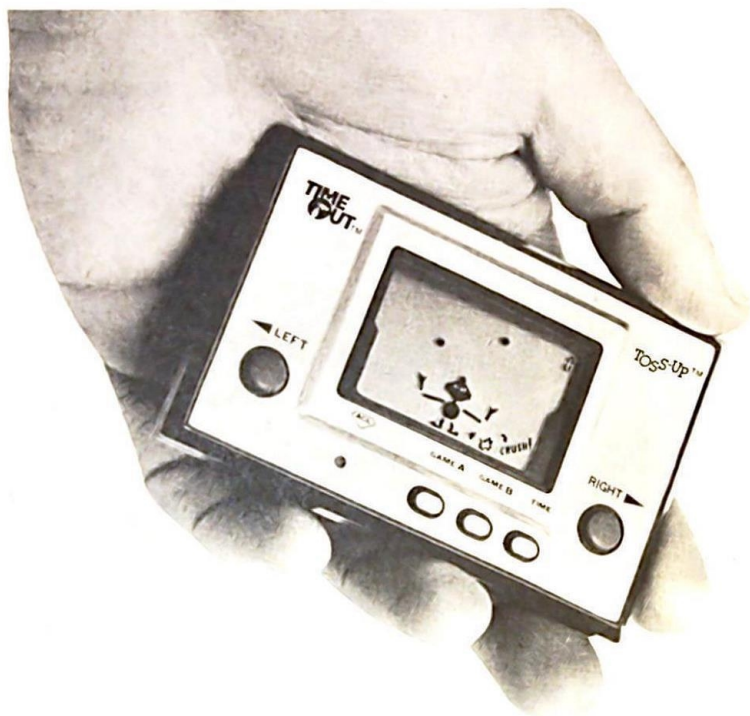
MANUFACTURER: Mego, New York, New York

PRICE: About \$50

POWER REQUIREMENTS: Two LR 43s or SR 43s

RATING: * * * *

RECOMMENDATION: Another strange one. I love it.

*Mego Electronics®***TIME OUT™ FLAG MAN™**

A reaction game in the TIME OUT format, FLAG MAN simply requires a good memory and fast reflexes. The character at center screen shows a sequence of random digits from 1 to 4. In game "A" you must touch in the sequence within five seconds. In game "B" you've got half that time.

A fast, tricky game—try it.

With quartz clock.

MANUFACTURER: Mego, New York, New York

PRICE: About \$50

POWER REQUIREMENTS: Two LR 43s or SR 43s

RATING: ★ ★ ★ ★

RECOMMENDATION: Not as original as the other TIME OUT games, but better than most games around.

LJN

COMPUTER IMPULSE™



This hand-held game combines pinball and bingo in an exercise of fast reactions. The game is simple enough—press the *shot* button and a ball floats up the right side of the playing field and then down into a grid of sixteen circles. These circles are arranged four across and four down (see photo). The object of the game is to align (bingo-like) combinations of four across, four down, or four on a diagonal. When the ball floats into the playing field, it pings from circle to adjacent circle, stopping for only split seconds in each position. In order to place the moving ball in a key position, you must hit the *stop* button at just the right moment. If you miss that perfect instant, the ball will stop on a subsequent position, thus requiring a revision in your strategy.

IMPULSE is played with a total of nineteen balls, and so a good player can literally fill the grid (sixteen circles) and win in every possible direction. One added feature makes all of this a great challenge: if the ball stops in a position already held, that ball is lost. In other words, if the ball stops in #11 and #11

is already occupied, the ball disappears from play. Since the ball's motion is so very erratic, this control element happens often enough to make play interesting. Each row of four is scored at one point; the outside four corners or inside four corners score three points. A perfect score is nineteen points (four across, four down, two diagonally, and both sets of corners).

COMPUTER IMPULSE is a single-player game, but play is fast enough to allow two-player competition by passing the game from player to player. Two skill levels, slow and fast, have a dramatic effect on game difficulty.

MANUFACTURER: LJN, New York, New York

PRICE: \$25

POWER REQUIREMENTS: Four "AA" batteries, no AC adapter available

RATING: * * *

RECOMMENDATION: LJN suggests play for virtually all ages (five to adult). Tests show that they are correct, with an addendum—the blip is a little too small for some in imperfect lighting conditions.

Parker Brothers™

SPLIT SECOND™



If MERLIN is for those whose greatest strength is in their perceptive skills, SPLIT SECOND is for those who favor fast fingers and quick reflexes. But anyone can play, as you'll see.

All of the movements on the SPLIT SECOND program of eight games are controlled by four directional arrow buttons, and two accessory buttons, one normally used to select games and the other to start games. In some games, *select* and *start* are used within the games as well.

The SPLIT SECOND screen features the outline of a 3 x 5 inch grid, which is composed of a series of fifteen different boxes. Within each box is the image of a large glowing dot. The lines which make up the boxes and the dot are not usually seen in any one particular configuration; instead, these red elements are lighted to create everything from star fighters to race course obstacles (you'll need some imagination). The way in which the display area is used is most clear in the first three games, each of which is a maze.

In game #1, a random series of line segments creates a mazelike path to a three-sided box. The ball starts at the top of the readout, and the box (the goal) is on the bottom. Using the arrow buttons, one must maneuver through the stationary maze elements and get the ball into the box. It's very easy. Easy enough to accomplish in 3 or 4 seconds. Easy enough to be accomplished with even the toughest mazes (a maze can't be very tough on SPLIT SECOND—there aren't enough available lines), even at breakneck speed, in a succession of different mazes. The idea here is to move the ball as fast as you possibly can, because the game is timing your actions to the *tenth of a second*, and the more quickly you complete ten mazes, the better your score will be. All scores, for all games on SPLIT SECOND are expressed in the simplest possible terms: by the number of seconds and tenths of seconds used to complete the challenge.

Game #2 is played in precisely the same way, but a maze appears for only an instant before it vanishes, leaving memory as your only guide. Game #3 eliminates even the flash, leaving your instincts to guide the way. Even the last of these isn't very hard because the mazes themselves are simply constructed.

The fourth and fifth games are space attacks, with an imaginary fighter ship (a dash on top, a dot in the middle, and a dash on the bottom—it looks a little like the STAR WARS X-wing fighter). The arrow controls are now used to guide the enemy fighter into the central target area, and either the *start* or the *select* button is used to fire. In game #4, all action is guided by your arrow controls; in the more difficult game #5, the enemy ships try to escape your control while you play.

AUTO CROSS, the sixth game, is an imaginary car race through an obstacle course. You must manipulate the dash (your car) through two circles or around one circle in a series of fifteen obstacles.

In the seventh game, STOMP, your ball is positioned at the center of the screen. Indicators appear to the right, left, or above or below the circle for an instant—and you must react with the appropriate arrow button before the indicator disappears. The goal, as always, is to react quickly. The game is scored only on the number of seconds required to successfully STOMP twenty indicators—up to 99.9 seconds (the maximum in all of SPLIT SECOND's games).

The eighth and final game on SPLIT SECOND is SPEEDBALL, and many thought it to be the most challenging game of all. A ball appears on the screen alongside four elements of dashes which form a line. The challenge is to trap the ball in a four-sided box by changing the direction of the moving line and its elements as fast as possible. The ball is elusive, to say the least, and few beginners can entrap the red blip until it virtually slows to a stop (games #4-8 all slow down if goals are not met quickly—a great automatic feature).

All games automatically stop after the maximum 99.9 seconds has elapsed. While playing the same game over and over, the computer will show your

best score if you press the *up* arrow between games. For one player, but you can hand the game to a friend and ask him to beat your score. Some games automatically alter speed based on your skill level.

MANUFACTURER: Parker Brothers, Beverly, Massachusetts

PRICE: \$40–\$50

POWER REQUIREMENTS: Six "AA" batteries or AC adapter

RATING: • • • • ½

RECOMMENDATION: Some games are better than others, with the first group of mazes the clear favorite. With these mazes and the rest of the assortment, Parker Brothers is likely to please most game players.

*Mattel Electronics®***AUTO RACE**



© 1980, Mattel, Inc., Hawthorne, California

One of the first electronic games available (it was copyrighted in 1976, making it a veritable antique), AUTO RACE is every bit as intriguing today as it was when first sold. It is, to be brief, a good game, a game that can be played by any age with a high degree of satisfaction.

The object of the game is to work your blip ("your car") from the bottom to the top of the electronic roadway a total of 4 times (4 laps in the lingo), all the while avoiding oncoming blips (other cars). Using a thumb-switch, you shift between three lanes, and have the option of four different speeds. Since the object of the game is to complete the four laps in the best possible time, the temptation would be to barrel through full speed ahead. But each collision pushes your car a little farther from the end of the lap, and so one must be judicious with one's use of the higher gears.

That's the whole game. It's one of those magical diversions that requires perhaps 10 seconds to learn, and hours to master. It is designed as a pass around game, where one player passes the game to a friend, who tries to beat his best score. This can go on for hours.

Remember to start the game in first gear—otherwise the car won't move at all.

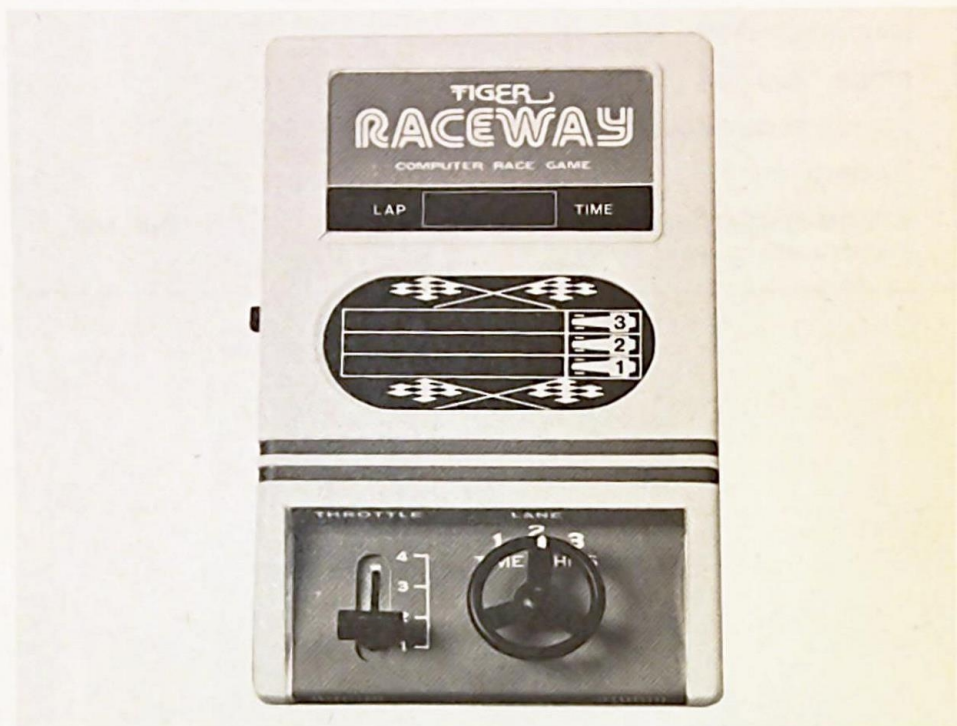
MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$20–\$25

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: • • • • •

RECOMMENDATION: For all ages, beginning at perhaps eight or nine.
Fun for adults as well as kids.

*Tiger™***RACEWAY™**

RACEWAY is played in much the same fashion as Mattel's AUTO RACE. The key differences are in the design: a small steering wheel is used to guide the "car" blip from lane to lane, and this wheel is perpendicular to the course itself (Mattel's controller is directly under the beginning of each lane, so it's a little more clear in the play of the game). As with AUTO RACE, there are four speeds, although the faster speeds are not really fast enough to avoid mastering the unit after a few hours of play.

A lap counter, somewhat frivolous in 4-lap action, is included as well.

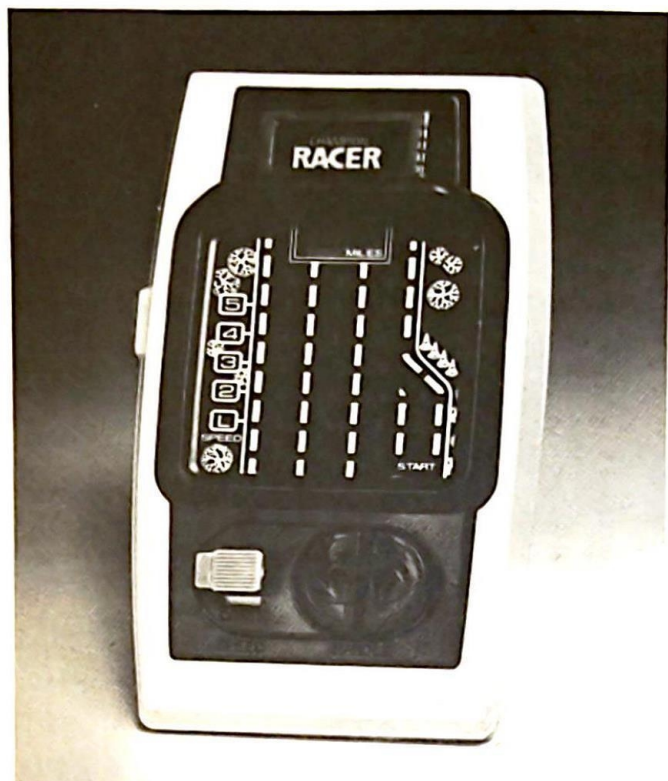
MANUFACTURER: Tiger, Mundelein, Illinois

PRICE: \$20-\$25

POWER REQUIREMENTS: Three "AA" batteries

RATING: **

RECOMMENDATION: Play and compare, if you're so inclined. In side-by-side testing, most racers liked the Mattel unit better.

*Bandai Electronics™***CHAMPION RACER**

Most people tested had a tough time warming up to this racing hand-held game, mainly because beginners show an enormous (and unintentional) propensity toward crashing. Once you understand the instructions (a task best accomplished in a learn-by-doing mode; the instructions are not very clear), this racecourse can be a real challenge.

The race begins as your car attempts to enter what amounts to a three-lane highway (raceway) from a right-hand ramp. By using the *up/down* switch, you can speed up or slow down, and weave between lanes, hoping to avoid a very crowded racecourse. There are three lanes (as in the other racing games), and within each lane is a grade which moves the game faster and faster as you near the end of each lap. It isn't terribly clear when each lap ends, so you do your best to speed along, avoid oncoming competitors, and re-enter the speedway whenever you're hit (using the entrance ramp) until the time allotted is over. There are 100 seconds to play, with penalties deducted for each crash.

MANUFACTURER: Bandai, Secaucus, New Jersey

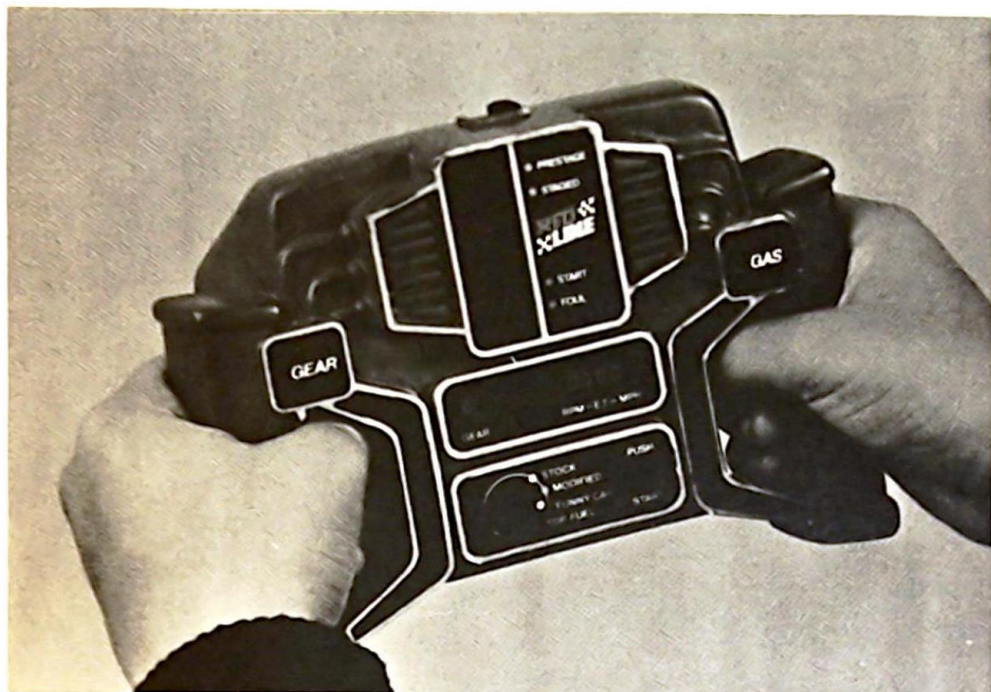
PRICE: \$25-\$30

POWER REQUIREMENTS: One 9-volt battery

RATING: * * 1/2

RECOMMENDATION: The finesses available on Mattel's AUTO RACE are not available here, but the game does play nicely for less demanding speed demons.

Kenner Electronics™

REDLINE™

Your motor starts to churn as you grasp the steering wheel—keep your eyes on the Christmas tree* as a string of yellow lights ends in a bright green light. That's the way this drag race game begins, as you clutch the steering wheel (and nothing more). The physical game includes the basic steering wheel assembly, the Christmas tree, a gearshift, a gas pedal button, and a speedometer readout.

You start in first gear, and quickly shift into second (and squeal your tires, just like in drag racing), third, and fourth, always pushing hard on the gas to better your elapsed time rating and average miles per hour. The game here, aside from pressing hard on the gas, is to accelerate and maintain a speed to just below your "red line" (the red line is the mark on a dragster's speedometer beyond which the engine blows) for the best average speed and best time. Level one sets the red line at 10,000 units (the unit of measure is not explained)—so you try to ride at about 9,000, avoiding a sudden end to your

*A Christmas tree is a ready-set-go signal used in professional drag racing. It is an upright row of colored lights which has become a sport standard.

game by accidentally topping the red line. The other skill levels set the red line at 9,000, 8,000, and 7,000.

The sound effects, incidentally, are terrific.

MANUFACTURER: Kenner, Cincinnati, Ohio

PRICE: \$40-\$50

POWER REQUIREMENTS: Two "AA" batteries

RATING: * * * 1/2

RECOMMENDATION: This is hardly your standard box-type electronic race game. The disembodied steering wheel feels a little strange at first, but once you get the feel of the gas and gear buttons, you'll probably love it.

*Ideal***ELECTRONIC 2-MAN SKEET™**



Inside the enormous box is a full-scale shooting gallery, known as 2-MAN SKEET. The sport of skeet, or skeet shooting, as it is generally known, usually involves one or more sharpshooters, armed with 12-gauge shotguns, who aim the guns at specially made clay plates called "pigeons." These pigeons are propelled into the air by a machine designed specifically for that purpose. Ideal's version of the sport is a scaled-down indoor version of this Olympic competition.

ELECTRONIC 2-MAN SKEET can be played by either one or two players, each equipped by plastic shotguns. The clay pigeons have been replaced with a ball of light, which is projected on any wall by the master console. Each time you hit a moving target, the computer replaces the image with a full-color explosion of light. With the sound effects (loud and plentiful), the concept of a shooting gallery is executed beautifully in your living room. Seven successful hits end the game, but there is no timer, and no shot-by-shot counter to tell you how well you did. Instead, you may set the mode knob to *Novice*, *Marksman*, or *Expert*, allowing one and one-half minutes, one minute, and a

half-minute to shoot all seven targets. In the *dual* mode (the *only* two-player game here—which makes the name of the game a bit off-center), there is no time limit, so both players just shoot until all seven hits are made.

SKEET plays three games, each involving the projection of a circle of light on a wall (any white or colored wall is okay, but the lightest colors are best. Also, avoid patterned walls at all costs, because you'll have an impossible time following the ball of white light). Game #1 SKEET moves the light circle back and forth on the wall for a few seconds, and then replaces it with another, and another until all of the shots are made. RUNNING TARGET, the second game, keeps a ball of light on the wall at nearly all times (you'll play in this mode most often—at least we did). DISAPPEARING TARGET dims the target from view periodically, without any apparent logic. This was the least favorite in the bunch, but all were fun to play.

MANUFACTURER: Ideal, Hollis, New York

PRICE: About \$50

POWER REQUIREMENTS: No batteries, it comes with an AC adapter

RATING: * * ½

RECOMMENDATION: There are lots of target games of every possible variety on the market. This is neither the most versatile nor the most exciting. The electronics are a good game element, and the sport is nicely reproduced, but this was not a top choice in any age group.

*Ideal***FLASH™**

Electronic beanbags? Sure, why not? There are six standard kid-sized beanbags, which are thrown at a circle of eight pie-piece plastic targets. At the center of the "pie" is a scoreboard, used in various ways in the different games. FLASH plays five different target games in all, each played without trouble by an eight-year-old. First is PINBALL (the name has nothing to do with the game), where six beanbags are thrown at the individually colored panels. The object is to light at least six indicator lamps (each panel has its own indicator light), and possibly even seven or eight lights (sometimes a beanbag can hit two panels at the same time; rarely, but sometimes). PINBALL isn't the most imaginative game here, so read on.

ALL OR NOTHING starts out with four of the eight panels "on" and four panels "off." Hit a panel whose indicator light is off and it turns on, hit an on panel and it turns off. Try to turn them all on or all off, using your beanbags. No count of shots or scoring when you eventually manage to win—just a loud siren.

The MEMORY game first flashes a point score for each panel on the

central scoring readout, including a zero value. Your points accumulate with each hit, but they're wiped out when you hit the zero panel. The values for each panel change with every game.

MOVING TARGETS lights panels one by one in a counter-clockwise action, and you must hit each single lit panel before it goes dark. TIME TRIALS is similar, but the action is random from panel to panel, and the time periods and adjusted scores vary per amount of time lit.

FLASH can be played by one, two, three, four, or five players. And incidentally, you can either stand FLASH on a table, or you can hang it on a wall (as you would a dartboard). Either way, this game is designed to stand up to a lot of punishment.

MANUFACTURER: Ideal, Hollis, New York

PRICE: \$50-\$60

POWER REQUIREMENTS: Four "D" batteries

RATING: * * * ½

RECOMMENDATION: This is basically a child's toy, but it really is lots of fun for the whole family. The beanbags make FLASH unique. You'll probably spend a number of pleasant evenings in the basement or family room with FLASH.

*Invicta Plastics***QUICKFIRE**

Invicta Plastics, famous for all of the MASTERMIND games, now offers a combination of the standard shooting gallery and a series of electronic games. QUICKFIRE offers a total of six different games, many of which require physical as well as mental prowess. All games are easily learned, but even the best shots will find the harshest skill levels more than challenging.

QUICKFIRE's target console stands roughly a foot high. Three light-sensitive receptacles serve as bull's eyes, each within a different colored target (yellow, red, blue). An indicator lamp sits beside each target. A digital scoreboard, readable at a distance, and a speaker (specific sounds identify hits, misses, wins, losses, etc.) is also part of the target unit. A pistol, which emits flashes of light, can be attached to the console via long cable (this is necessary for the timing of certain games). The object of each game is to hit a target with speed and accuracy, and unfortunately the pistol is highly inaccurate.

Game #1 simply requires players to shoot out lit targets. It is an excellent warmup exercise. The second game asks players to shoot out lit targets one by one, with speed increasing through each target. Games #3 and #4 require players first to recall a random sequence of indicator lights, and to shoot the appropriate targets immediately afterwards (game #3 uses three-target

sequences; game #4 uses five-target sequences). Game #5 is a progressive sequence game, first with a sequence of one, then two, then three, and so on to fifteen. The progressive game, inexplicably, does not simply add one new target to the previous grouping (as in SIMON)—instead a whole new sequence is introduced each time. It is virtually impossible to recall fifteen lamps, in random order, after seeing it only once, and so the competition emphasizes not the first player to win, but the first to lose (by shooting the wrong target) instead. Game #6 allows players to create sequences for one another, in groups of three, six, or nine.

A skill switch allows QUICKFIRE to be played by fairly agile novices, fast-fingered amateurs, or sure shots. All games reset immediately after play.

MANUFACTURER: Invicta, New York, New York

PRICE: May vary considerably; compare stores

POWER REQUIREMENTS: Target Console: Six Size D Cells or AC adapter
Pistol: Two AA cells (The pistol bulb (2.5 Volt) may also require replacement.)

RATING: * * * 1/2

RECOMMENDATIONS: Plan to use this game in a dimly lit corner. Depending upon skill, your pistol position will be two to ten feet from the targets (after ten feet, pistol inaccuracy becomes an annoyance).

Bambino™

SAFARI™



When I was first introduced to SAFARI at the Toy Fair Convention, I decided that I wanted to have it for my very own. For some reason (which I have not been able to discern), SAFARI is consistently one of the favorite games played by test groups and even visiting friends. It's one of the few games that I keep out on the coffee table, and it commands the attention of nearly anyone who picks it up, and keeps that attention for about 15 minutes at a time.

SAFARI, silly as it sounds, is a game of caging animals in the jungle. Moose, cobra, apes, tigers, hippos, giraffes, elephants—they're all here, pictured in most simple form on a 21-square playing field. Each animal lights at random, and your job as zookeeper is to maneuver your cage, using the four directional arrows made famous in the sports games, around their lit squares before those squares dim. You see a giraffe, for example, in the center of the top playing field line, and you run your cage up to that square, ready to press the *catch* button once you've got him surrounded. The race

becomes a matter of getting to that giraffe before her light goes out, which in turn causes one or more of the other animal lights to go on. It's crazy, but it's lots of fun.

Three skill levels control the speed with which the animal lights flash on and off. A bonus scoring chart is included in the instructions, rewarding strings of successful cagings accomplished "in a row"—without missed cagings in between.

MANUFACTURER: Bambino, Los Angeles, California

PRICE: \$50–\$60

POWER REQUIREMENTS: Four "C" batteries, or AC adapter

RATING: ★ ★ ★ ★

RECOMMENDATION: Try before you buy. We all loved it. For all ages.

CHAPTER 4

Learning Aids

Most of the computers in this chapter are not games. Rather, they are special-purpose, hand-held devices that teach. Many, but not all, of the devices have been created as a result of long and careful study of the educational process, and will therefore be an enormous help to children who are learning verbal skills or the fundamentals of mathematics. Texas Instruments is the clear leader in this category, having been most fastidious in the pre-market testing of all such devices.

Children will find plenty of games to play in these learning aids—games that are fun to play, games that teach important concepts while they entertain. It is here that educators place their greatest hopes for the future—in a computerized classroom situation, where intelligent machines work in tandem with teachers, perfecting the learning process just a little bit more every day. Age ranges are listed with every game in the chapter.

Just as there is nothing more detrimental to a child's development than a bad teacher, you will find that there is no advantage in purchasing an inferior or frustrating learning device. Read these reviews carefully, parents—it would be best to discuss them with your child's teacher.

Texas Instruments

SPELLING B™



This tidy little package, including keyboard and workbook in a convenient plastic folder, is intended to make spelling a more colorful experience for elementary school youngsters. The unit has 264 words stored in the computer's memory, which have been chosen with the help of educators as words particularly important in the learning of spelling.

Select one of three levels, press the *on* button, and we're ready to play the first game, called SPELLING B. A number appears on the display, and the instructions tell us to find a colored picture in the workbook identified by that number (there are 264 pictures, grouped for both difficulty and concept). The number is 78, so we turn to number 78, and there is a drawing of a broom. Let's type in "b-r-o-o-m." The computer displays "right," and shows us the next number (they usually run in order, so the next would be 79). If we enter the incorrect spelling, SPELLING B shows a "wrong." If we do so twice, SPELLING B will first display "wrong," and then the correct spelling of the word. STARTS WITH is a simpler version of SPELLING B, requiring only the first letter of each numerically identified picture. In both these games, players may request "free letters" by pressing the *Clue* button. And in both cases, the game will provide a final score after 5 words are played.

MISSING LETTER is a partial game of "hangman," where several letters of a word are shown and the player must fill in the rest correctly. MYSTERY WORD is virtually the same game, only it begins as does "hangman" with a full set of blanks in place of letters. In both cases, the level selected for play determines the length of the words, and in both cases, the *Clue* button may be used to make play easier. MISSING LETTERS is scored on a number correct out of five words; MYSTERY WORD flashes "You Win" if you crack the word in nine guesses or less, and "I Win" if your nine letter guesses are insufficient to spell the word. (The letter guesses, as in hangman, are counted only if they're wrong—if the correct letters only are entered there will not be a single point deducted from the score).

The final game on SPELLING B allows the entry of any word (3 to 7 letters) for a game of anagrams. It can be played by one or two players. The first player, for example, might enter the word "spell" into the memory, which the computer would recall as, perhaps, "lelps." The second player would then retype the entire word, for which he gets either a "right" or "wrong" display. Two wrongs results in the word being displayed. Up to five words may be stored in the computer's memory for each game. Scores are shown as number correct, both in asterisks and in digits (why both?—most children who can spell "d-o-g" can recognize the digits 1–5).

The game automatically turns itself off if left idle for more than a few minutes.

MANUFACTURER: Texas Instruments, Dallas, Texas

PRICE: \$40-\$50

POWER: One 9-volt battery, or AC adapter

RATING: . . .

RECOMMENDATION: The picture identifications in the first two games are effective teaching tools, but they are, of course, limited to 264 words. The "hangman" games require considerably more sophistication, and the anagram game requires more sophistication still. It would seem that TI has created a learning series for three highly distinct age/skill groups here. The jump from level to level can be a frustrating affair for children who are unready to do so, and so the use of SPELLING B should be carefully monitored in order to assure the most advantageous uses of the game. Additionally, the "personality" of SPELLING B is virtually humorless, and so a poor speller may be further frustrated by the constant appearance of the word "wrong."

For good spellers and children who enjoy playing progressively more difficult word games, SPELLING B can be fun to play.

*Texas Instruments***SPEAK & SPELL™**

This brightly colored fun-filled device is one of the finest electronic innovations yet created. It is a talking keyboard, with an initial vocabulary of over 200 words, designed to teach elementary school children the fundamentals of spelling. And it does the job beautifully.

A fast tour through the keyboard is necessary before the exercises are detailed. There are 40 keys, 26 of which are the letters of the alphabet. Turn the game on (that's another button), and press a letter, perhaps the "W." SPEAK & SPELL responds in a male voice—"Double-yooo." Each letter in the alphabet is pronounced on the touch. And as for the dozen-or-so other

buttons, you'll find start switches for 4 other games, a *Replay* key (used to play an entire exercise for a second time, using the same word list), a *Repeat* key (asking SPEAK & SPELL to reiterate its most recent word), a *Clue* key (asking for "free letters" in a "hangman" game), an *Erase* key to correct letter-input errors, an *Apostrophe* (used to teach contractions and possessives), an *Enter* and a *Go* key for internal game operations, and perhaps most important of all, a *Module Select* key (identified as # on the keyboard). This module key allows the entry of a full catalog of new spelling lists, for all age groups, to be explained later in this review.

The basic SPELL game is started by pressing *On* and *Go*. The toy requests, "Spell EARTH," and shows a starting space on its calculator-style display. E-A-R-T-H is typed, SPEAK & SPELL pronounces every letter, and then the player presses *Enter*. SPEAK & SPELL provides immediate feedback, by saying simply "That is correct—now spell ANSWER." This goes on for a total of ten words, each one selected from an educator-approved list of problem words and words which represent important concepts. The emphasis here is not in the game playing, but in lighthearted spelling exercises. It is clearly fun to learn with SPEAK & SPELL. Every child I tested was extremely positive when working with the "toy," and nearly every child was already familiar with the unit when I as much as mentioned its name. Most were able to teach me how it works.

A favorite game for the elementary school student on SPEAK & SPELL is MYSTERY WORD, which we all know as "hangman." This is the most comprehensive game on the unit, since it forces deductive thinking as it pronounces every letter in the hidden word. A series of dashes indicates the number of letters in the mystery word, and a game allows seven letter guesses, though these letters are never counted on the display. The mystery words themselves, although they are obviously on the spelling lists in the computer's memory, are never pronounced upon discovery. The game simply ends with an "I Win" or "You Win" voiced by the unit.

SECRET CODE is mainly a letter-recognition game, whose most popular uses are in the game category. All of the letters in the alphabet are permanently linked to other, secret, letters. An "A", for example, is always an "F", and "M" is always "T"—the reverse is also true in all cases. This simplistic version of cryptograms can be lots of fun, particularly in the games provided in the activity book.

An additional "???" mode randomly displays (and pronounces) letters. Again, the uses of this function are mainly in activity book games, which are generally designed to reinforce specific vocabulary and word-building skills while having fun.

SPEAK & SPELL's internally stored program can be used on any of four levels of play in the learning games. At least a half-dozen additional modules can be purchased to allow specialized concentration in a particular spelling area. BASIC BUILDERS, for grades 2 and 3, emphasizes confusing con-

cepts in spelling. VOWEL POWER, for grades 2 through 4, concentrates upon the use of vowels and vowel word structure. SUPER STUMPERS and MIGHTY VERBS are designed for grades 4, 5, and 6. The former deals with irregular spellings, silent letters, double consonants, and related difficulties. The latter encourages a lighthearted learning experience involving verb endings which change due to tense changes, and other problems in verb endings. Grades 7 and 8 are encouraged to improve their most-misspelled list with a SUPER STUMPERS designed for that age group. HOMONYM HEROES, for the same grade level, uses games to teach and to reinforce the spellings and the definitions of homonyms. Each module is scarcely half the size of a credit card, and roughly a half-inch thick; the large packages in which they're sold also include activity and instruction books.

MANUFACTURER: Texas Instruments, Dallas, Texas

PRICE: About \$50

POWER REQUIREMENTS: Four "C" *Alkaline* batteries (use the Alkaline here without question—any battery that shows signs of weakening will affect the clarity of speech). AC adapter available.

RATING: * * * * ½

RECOMMENDATION: This is an extremely effective, palatable, teaching-reinforcement device for children. Even the youngest children just learning their ABC's will adore the talking box and the array of buttons. Older children, despite the graded modules, seem to lose interest in the game in favor of other activities. The game did not test well with seventh and eighth graders, whose main objections seemed to be that the games were juvenile.

*Texas Instruments***SPEAK & READ™**

The human voice is a highly significant force in the process of learning how to read. SPEAK & READ merges concepts of letter recognition, word recognition, and pronunciation, with active, fast-paced drills designed to develop skills related to construction as well as word meaning.

WORD ZAP is a word-recognition exercise, where a word is first spoken, and then shown as one of three words flashed across the screen. The idea is very nearly a game—hit the *Word Zap* key (this is a pressure-sensitive keypad, so you're really just touching a spot on a solid plastic sheet marked with an asterisk and labeled *Word Zapper*). This moves quickly, so the student must have his or her finger on the asterisk, ready for an instantaneous reaction when the spoken word appears on the screen.

HEAR IT is a similar recognition drill which utilizes a 250-word vocabulary list in the basic memory of SPEAK & SPELL. Additional 150-word modules, with other vocabulary words, are available beyond the basic list. The student types in a word from the prescribed word list, and the machine recites the word. It's a vocabulary expansion exercise, and an excellent example of TI's ability to introduce "computer-associated instruction" into the lives of young children. READ IT operates in a similar fashion.

As with SPELLING B, this newer unit uses a book full of pictures to link everyday objects with words and phrases. PICTURE READ uses this book of pictures to develop skills in a lighthearted way.

WORD MAKER teaches the use of syllables through phonic elements, as in "cat/hat/sat."

LETTER STUMPER uses the progressive memory concept, where a letter is played, repeated, and played again with a new letter. It teaches the matching of letter sounds and letter symbols.

All SPEAK & . . . learning aids are packaged with the very clumsy handling by young children in mind. A carrying case, earphone, and built-in carrying handle are included.

MANUFACTURER: Texas Instruments, Dallas, Texas

PRICE: About \$80–\$90 (additional modules are \$25 each)

POWER REQUIREMENTS: Four "C" batteries, or AC adapter

RATING:

RECOMMENDATION: Consistent with the entire TI line of learning aids, SPEAK & READ is a fine special-purpose computer which uses the computer voice to its best advantage.

*Texas Instruments***MR. CHALLENGER™**

Designed for a slightly older crowd than the other TI electronic devices, MR. CHALLENGER plays word games—some are designed to educate, and others are designed purely for fun. There are four games here: MYSTERY WORD, WORD CHALLENGE, LETTER GUESSER, and CRAZY LETTERS. Each game is played on a full-alphabet keyboard and calculatorlike letter/number readout. Three levels of difficulty are offered on all computer-generated games.

Hangman is the theme for MYSTERY WORD, wherein the computer creates a word of up to seven letters to be guessed letter-by-letter with up to 8 wrong guesses in a single game. A *clue* button, used in exchange for 2 wrong letters, exposes one letter per touch. MR. CHALLENGER keeps score on each MYSTERY WORD match, based on level of play, number of incorrect guesses, time used, and the number of clues used. A bright adult will score superior totals every time, as will a bright teenager, which makes this game best for the student-aged group. There's a second-player mode, complete with scoring capability, here as well. The game of WORD CHALLENGE

is similar to MYSTERY WORD, with a human opponent providing the word in the computer's stead.

CRAZY LETTERS starts with a single letter exposed, and acknowledged, followed by the first paired with a new letter, then those two paired with a third, and so on. The first level uses letters A, B, and C, the second also uses D, and the third uses A, B, C, and D, and E. The adults who will inevitably play this game will probably wish for a SIMON (excuse me—CRAZY LETTERS) using most of or all of the letters in the alphabet. That would be truly different—this is more of the same, perhaps a small-fry, letter-recognition game on the simplest possible level. It could be so much more.

LETTER GUESSER appears in number form in other TI games—it merely shows "A—Z," asking for any letter between them. If we pick "J," the letter choice might be narrowed to "A—J," and we continue narrowing down to "A—E" and "C—E" and we finally come up with the answer—"D." It's fun a few times for adults, for longer in the hands of children.

After three minutes of non-use, MR. CHALLENGER turns himself off.

MANUFACTURER: Texas Instruments, Dallas, Texas

PRICE: \$30–\$35

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: ★ ★ ★ ★

RECOMMENDATION: This is a good learning device for the student who is just learning to read and spell with a more advanced vocabulary. Unfortunately, the diversity of the games is somewhat limited.

*Texas Instruments***LITTLE PROFESSORTM**



Children's calculators and related learning devices were an obvious outgrowth of the remarkable pocket calculator revolution—LITTLE PROFESSOR is a survivor of that period. This owl-like device serves as an electronic “flash card” system, where simple numerical problems are posed on a calculatorlike readout.

Parents and interested children can select one of four difficulty levels in addition, subtraction, multiplication and division. Once the level and the operation is set, ten simple problems are shown, one by one, on the display. A child has three chances to “touch in” the correct answer, and if he is successful, he scores one point. (If he is not successful, LITTLE PROFESSOR displays the answer himself). At the end of the drill, LITTLE PROFESSOR displays the number of correct answers.

Texas Instruments tried hard to make this game “fun” for all children, providing a bright-yellow cartoonlike gameboard, and a 24-page pamphlet chock full of games to be played with numbers, but LITTLE PROFESSOR is not nearly as engaging as the newer items in the line. In 1976, when LITTLE PROFESSOR was introduced, he was hot stuff. Five years later, with far more flexible technology now the rule, there are frankly better learning devices available (most of them, in fact, from Texas Instruments).

MANUFACTURER: Texas Instruments, Dallas, Texas

PRICE: About \$15

RATING: * * ½

POWER REQUIREMENTS: One 9-volt battery, no AC adapter

RECOMMENDATION: For grade school children with a bent toward math games.

Texas Instruments

DATAMANTM



Roughly a year after LITTLE PROFESSOR was introduced, DATAMAN started counting rings around his mathematical precursor. DATAMAN, looking like a science-fiction robot, is a thoroughly enjoyable numerical tool for learning and diversion. His story—including encounters with the evil AntiMath and his nemesis, Commander NumberFun—begins the instruction pamphlet. He plays no fewer than six games—actually some are not really games, just electronic versions of classroom exercises, but don't tell the kids—and each one serves a specific educational purpose.

DATAMAN looks like a calculator with a few crazy keys, which upon close inspection, you'll discover are used to set the "+", "-", "×" and "÷" apart from the digits and the game-selection switches. Texas Instruments did not settle for a simple list of games numbered 1, 2, 3, 4, and so forth—instead, each game has its own name, and its own key on the keyboard. This adds to the experience.

Let's play a game that you may recognize—DATAMAN calls it ELECTRO-FLASH. The game begins as we press *On*, then *Electro-Flash*, and then one of the operational keys—for example, the multiplication key. Since this is a game of "times tables," multiplier is then chosen ($\times 5$, $\times 6$, $\times 7$, etc.)—in this case we choose $\times 7$. Press *Go* and the first example appears—" $0 \times 7 =$," and you enter "7"—which is wrong. DATAMAN responds with an "EEE," and gives you another try. Let's give the right answer—"0." His readout goes a little crazy (he calls it a light show), as a reward for the correct answer. Here's

the next question—“ $1 \times 7 =$ ”, to which we answer “7.” The times table goes through “ 9×7 ,” and it is followed by the total correct, along with a count of the number of seconds you needed to get through the table. This is easy fixings for a classroom contest, where he who makes his way through the multiplication tables with the most speed and accuracy wins some sort of a prize (no homework for a week). And don't forget that ELECTRO-FLASH can be used for problems in addition, subtraction, and division as well as in multiplication.

NUMBER GUESSER is a silly little guessing game on the surface, with a far more serious intent riding just below the visible surface. The idea of the game is to guess a number which lies between two other numbers—a clever way to introduce the concept of “greater than/less than.” One example explains the whole game: the computer puts up 9 () 100, and I type in “50.” DATAMAN responds by displaying 9 () 50, and I type “25.” He shows: 25 () 50, and I type “38,” to which he responds 25 () 38. I type 32. A good guess, for his display goes into that crazy light show again—I was correct!

WIPE OUT is a speed game for two, three, or virtually any number of players. It is a “Hot Potato” game, where the idea is to answer an addition problem as quickly as possible and pass the machine to the next player, lest he start his light show while in your position and cause you to lose the game. The idea, obviously, is to encourage fast, accurate thinking in a game that seems to be all fun and very little work at all.

The game of Nim, an ancient favorite reinforcing the skills involved in subtraction theory, is the basis for a game called FORCE OUT. DATAMAN selects a number between 30 and 70 to start play. Players take turns subtracting any single digit from 1 to 9 from the master number and its subsequent remainders. The player who subtracts the final example (generally $1-1=0$) and scores the zero loses the game. Let's try one: DATAMAN shows 37. I subtract 8, leaving 29. You subtract 7, leaving 22. I subtract 1, leaving 21. You subtract 2, leaving 19. I subtract 8, leaving 11. You subtract 8, leaving 3. I subtract 2, leaving a remainder of 1. You must take a move, and DATAMAN will not allow you to subtract 0, and so you subtract 1, and end up with the zero. I win.

FORCE OUT has a variation, of course, which DATAMAN calls FIRST OUT. In this game, the object is just the reverse of before—the object of the game is to be the player who makes the final subtraction. Either game can be played with 2, 3 or even 4 players effectively.

Two other exercises, a bit less oriented toward fun than the rest, are also offered on DATAMAN. MISSING NUMBER, which allows younger children to concentrate on specific problems in arithmetic by shifting the “open” digit from one position to another within an example (e.g., “ $2 \times \text{——} = 6$ ”; “ $\text{——} + 17 = 30$ ”; or “ $25/5 = \text{——}$ ”), is basically a timed drill. ANSWER CHECKER allows children to enter their own examples, which DATAMAN will check, and, if necessary, correct. A MEMORY BANK option allows parents to enter

up to ten problems for later play by children (this is also the basis for some child-to-child competitions). In both MISSING NUMBER and ANSWER CHECKER, DATAMAN keeps score and tells children how many answers were correct out of the ten shown. The latter game also shows the time used, in seconds.

Step-by-step instructions, along with an imaginative playbook designed to broaden the game-based uses of DATAMAN's capabilities, are extremely well packaged.

MANUFACTURER: Texas Instruments, Dallas, Texas

PRICE: About \$20

POWER REQUIREMENTS: One 9-volt battery, no AC adapter

RATING: • • • • •

RECOMMENDATION: For younger elementary school children just learning math, DATAMAN is a very effective aid to the teaching process, particularly when used with teacher's supervision.

*Texas Instruments***SPEAK & MATH™**



Modeled after the highly successful *SPEAK & SPELL*, this is a device that teaches numerical recognition and arithmetic processes, and has some fun along the way. To make this "learning aid" even more accessible, Texas Instruments has added a computerized voice, and has designed several exercises based on this remarkable element. All problems are solved by touching buttons on the pressure-sensitive keyboard now typical of all *SPEAK & . . .* devices made by TI.

In *SOLVE IT*, one of six different exercises, *SPEAK & MATH* simply talks and shows a numerical equation—"One plus three equals . . .," requiring students to press the appropriate buttons to answer. *WORD PROBLEMS*, activated by another selection button, requires students to listen to the problem, without the assistance of the numerical display. In both games you may preset the operation to be used (addition, subtraction, multiplication, division). *MIX IT* jumps from operation to operation. In both cases, the problems are run, and the computer counts the number correct at the end of the set.

GREATER/LESS is very simple—numbers are shown, and users must press either a $>$ button for "greater than," or $<$ for "less than." It's a basic, essential exercise. WRITE IT is equally straightforward, encouraging recognition of the sound of a number's name, and the way the number looks in print.

NUMBER STUMPER is a MASTERMIND game, played with either two, three, or four digits in the hidden code. The voice is helpful in guiding players, especially young players, through a challenging game.

The *Enter* button is used in most exercises to avoid errors; a *Clear* button is provided for the same reason.

With three skill levels, thirty-two-page activity book.

MANUFACTURER: Texas Instruments, Dallas, Texas

PRICE: \$85

POWER REQUIREMENTS: Four "C" batteries, or AC adapter

RATING: ★★★★★

RECOMMENDATION: This is the only speaking TI learning aid that does not accept new memory modules, but there are 100,000 random problems already loaded, so that is no problem. This is a highly workable device, that does everything it sets out to do. Be sure to buy carefully—the SPEAK & MATH comes in the *gray* case.

*Mego Electronics®***2XL™**

"The robot with a personality" is one of the most diversified electronic toys/games on the market today. 2XL is magnificent in design and in execution—he teaches without becoming a heavy-handed educational tool, he plays the quizmaster but never becomes ponderous or boring, and he takes the whole concept of toys-that-teach two or three steps in a very positive direction.

2XL is really a simple fellow, whose robotic persona requires virtually no instructions, and, thankfully, no batteries at all. An AC adapter plugs into one of 2XL's arms, and a standard 8-track audiotape plugs into his belly. Once these two tasks are accomplished, 2XL needs only to be flipped on, and he's ready to go. He might start with a ridiculous riddle—"Do you know why it gets so hot in a baseball park after the game? It's because all the fans leave." A silly little laugh follows, and then it's down to business—

perhaps a question about the sci-fi series STAR TREK, with three possible answers. Multiple choice—just answer by pressing "A", "B" or "C" on 2XL's mid-section, and after a second or two, the robot will tell you whether you were right or wrong, and why the answer had to be the letter, say, "A". He might follow with a question about baseball, or the metric system, or even a puzzle that would require you to look at a workbook page (included with each cartridge). 2XL uses his buttons to allow three different questions—each of varying difficulty—and the choice between them within a single subject heading. And if you don't really understand the question, just press *question* (the far left button), and 2XL will give you more information.

This robot's winning personality, and his apparent versatility, originates in the clever use of different tracks on an 8-track cartridge. 2XL jumps from track to track to increase question difficulty, to provide more information about a question, even to play thinking music. The four buttons that sit in 2XL's mid-section are actually switches that cut from track to track, in a manner identical to the operation of an 8-track player you might have in your family car.

The secret behind 2XL's success is the cartridges, for this is essentially a radio quiz show with lots of customizing. Each cartridge is totally different (with different jokes, but never without that irrepressible 2XL personality); the current catalog includes SPORTS, GAMES AND PUZZLES, "GUINNESS BOOK OF WORLD RECORDS," ASTRONOMY, METRIC SYSTEM, BELIEVE THIS OR NOT, INTERVIEWS WITH GREAT PEOPLE FROM HISTORY, ANIMAL WORLD, NOSTALGIA, STORYLAND: 2XL & THE TIME MACHINE (where kids use the buttons to control the actual story), U.S. PRESIDENTS, and a preschooler's BASICS OF ABC's. In some cases, more than one cartridge is available on a single topic (e.g. SPORTS); one GENERAL INFORMATION cartridge is provided with the toy.

2XL also plays standard 8-track cartridges.

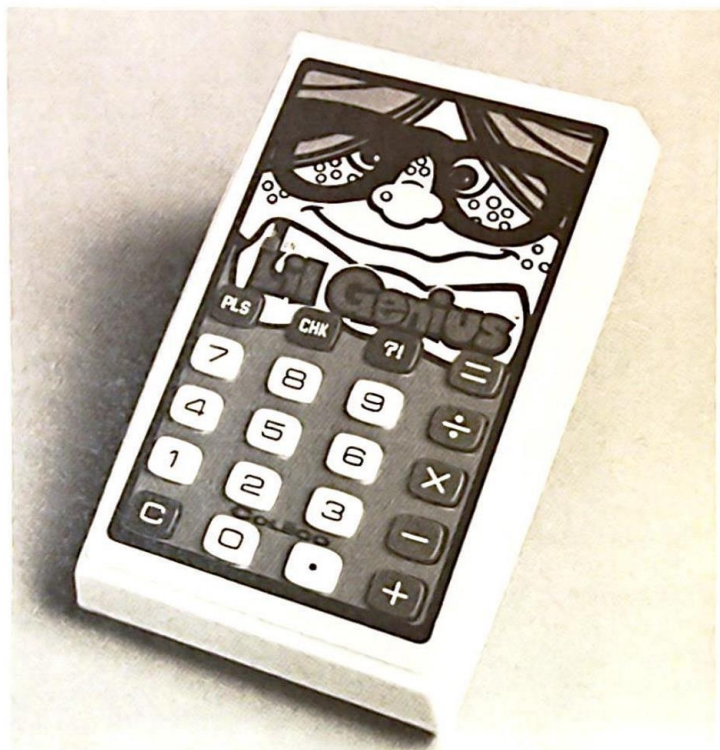
MANUFACTURER: Mego, New York, New York

PRICE: \$60–\$75

POWER REQUIREMENTS: No batteries, AC adapter provided

RATING: ★★★★★

RECOMMENDATION: Mainly a children's toy (ages eight and up), but substantial enough for the whole family to enjoy for hours.

*Coleco***LI'L GENIUS™**

Product of Coleco Industries, Inc.

This is your basic "answer checker" with only a green light (correct) and a red light (wrong), designed with the face of a bookish cartoon character. You create the problems, enter them into the keyboard, press "=" then your answer, then "PLS" then "CHK" then "?! " for every problem. A number of recent introductions vastly improve the teaching of math through electronics. This was one of the first.

MANUFACTURER: Coleco, Hartford, Connecticut**PRICE:** About \$10**POWER REQUIREMENTS:** One 9-volt battery**RATING:** ***RECOMMENDATION:** Try the other math devices, or a calculator.

APF

MATHEMAGICIAN™



This very imaginative children's learning device is a combination calculator, answer checker, and game machine. Designed to encourage youngsters to enjoy the world of numbers, nearly all seven MATHEMAGICIAN exercises have definite value.

The first group of games is essentially flash card exercises, allowing one or two digits on the left side of each equation, and the four basic arithmetic operations. One can practice tables, or simply work with random groupings. The display is large and clear; the only problem with MATHEMAGICIAN in the flash card department is the lack of a "clear" button to change answers in midstream. All can be played by one or two children. All games can be timed, as well.

There are six other games to be played on MATHEMAGICIAN, each with its own plastic template to fit over portions of the digital readout.

NUMBER MACHINE merely flashes a digit, which must be typed in, on the keyboard. It's a "number recognition" game, not very imaginative. COUNTIN' ON flashes a series of the same numbers; once a series has been com-

pleted one must enter the sum total. This is a dynamic way to teach children the similarities between addition and multiplication. WALK THE PLANK is a bit too simplistic, but it basically teaches the "greater than/less than" concept. GOOEY GUMDROP uses this same concept, but expands it into a simple two-dimensional geometry, where players must identify a point in space by using X and Y vectors (it is laid out so that children really can understand how to play, but the concept is a sophisticated one). FOOTBALL rewards correct answers to arithmetic problems with yardage gains (there is no field—only a scoreboard). LUNAR LANDER is a game of numerical logic, again in children's size, involving a careful expenditure of fuel in a rocket re-entry simulator.

MATHEMAGICIAN uses up to four lights to "talk" to players—to say things like "That's right," "Try this one," "It's larger," "It's smaller," "Got It!" and so forth. It's most effective.

MANUFACTURER: APF, New York, New York

PRICE: \$30

POWER REQUIREMENTS: Four "C" batteries, no AC adapter

RATING: * * * *

RECOMMENDATION: A few games are a little weak, but this is a very handy teaching machine.

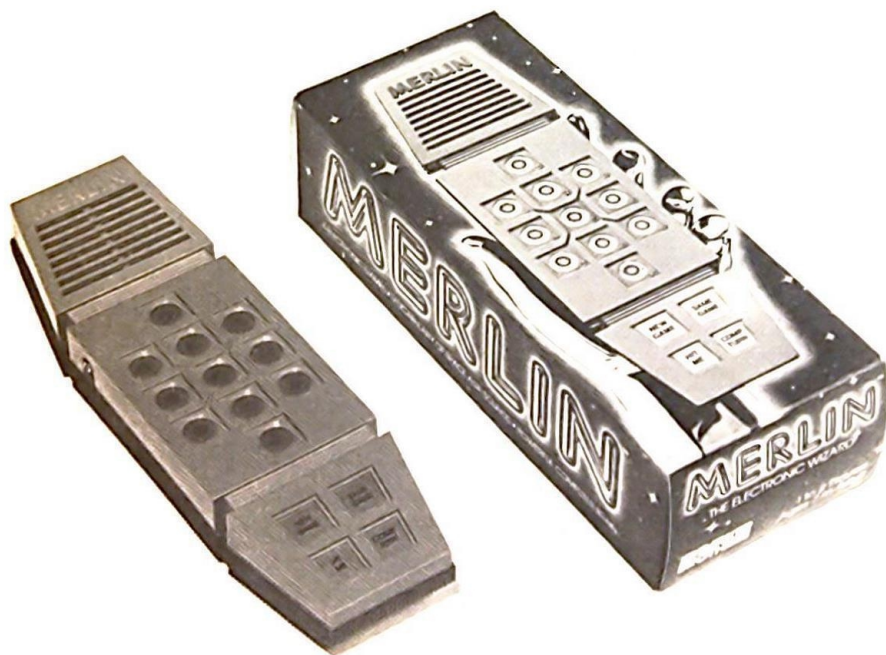
CHAPTER 5

Multiple Game Systems and Special-Purpose Devices

There are a good many games in this book that fit several categories, and several multi-game units that must logically be considered as a system rather than as a game. These two types of games, along with "unclassified" devices such as horoscope and biorhythm computers, fill this chapter.

Parker Brothers™

MERLIN™



Parker Brothers' MERLIN was among the very first nationally popular electronic games, primarily because of the company's extraordinary success with their game line (MONOPOLY, SORRY, CLUE, etc.). MERLIN is a wizard of sorts, capable of playing six different games, most of which can be played by almost anybody for long periods, with a minimum of instruction. Physically, the game looks like a futuristic touch-tone phone, with a few extra buttons.

From the very first game, TIC-TAC-TOE, MERLIN proves to be a strong competitor, possessing a sharp, accurate mind. TIC-TAC-TOE can only be played as a one-player game, and is started by simply touching the *New Game* button on the lower area of the game, and the #1 button in the play area. As the instructions promise, this action causes MERLIN to flash his #10 button, for reasons never explained. The choice of who moves first is yours—either touch one of the nine buttons used in TIC-TAC-TOE, or touch *Comp Turn* ("Computer Turn") on the lower panel. MERLIN's squares are indicated with steady red lights within the squares; your own squares are shown with flashing red lights. The game follows along the usual rules until one party wins (or, as is often the case, the game ends in a draw). If you want to play again, just touch *Same Game*, decide who places the first mark, and you're off and running.

When you tire of TIC-TAC-TOE, press *New Game* (actually, the word "press" is inappropriate, since the pressure-sensitive buttons are so very, well, sensitive). After *New Game*, touch #2, for MUSIC MACHINE, and MERLIN becomes a hand-held organ. Buttons #2–#9 play the scale, button #0 is a rest, and buttons #1 and #10 offer notes outside the scale. You can play any tune whose notes fall within a single scale (21 tunes are included in the instructions, but you'll quickly learn to make up your own), and by touching *Comp Turn*, you can sit back and listen while MERLIN replays your composition. Once again, you can remain in the MUSIC MACHINE mode and start a new song by pressing *Same Game*.

ECHO is game #3 (touch *New Game*, then #3), which is a fast-paced memory game. You tell MERLIN how many notes (one–nine) you want to hear and see on the playing field, and MERLIN will breeze through a nonsense song. One-, two-, and three-note songs are easy, but try to follow eight or nine notes on the tiny playing field, as that little red dot jumps from button to button. ECHO, depending upon the difficulty you set yourself, can be one challenging game.

MERLIN's fourth game is based on the card game of BLACKJACK, and so it is called BLACKJACK 13. The object of the game has been revised for MERLIN's ten-button keypad—simply acquire the higher hand, of thirteen points or less. MERLIN starts the game by showing one "card" in his hand with a steady light in one of the boxes (let's say MERLIN holds box #3 to start the game). At the same time, he shows one number for you, indicated by a flashing light in, say, #5. He has three points, and you have five. Touch *Hit Me* (bottom panel), and MERLIN randomly lights #1, so your new total is six

points, going for a high of thirteen. The only logical move is to touch *Hit Me* again, which results in a 4, for a new total of ten on your side. MERLIN still stands with three points. You need a 1, 2, or 3 to remain in the game—and you notice that you already hold the #1, and that MERLIN has the #3, leaving only the #2 available. With 6, 7, 8, and 9 still available, the odds are good that the next hit will put you over. And so you stand, by touching *Comp Turn*. MERLIN randomly selects a number for himself (this is a dubious action for any worthy opponent, but for some reason, you learn to trust computers in this regard) and the number is a 9. MERLIN's total is now twelve, to your ten. He just won the game. To play again (always against MERLIN, never with a partner, unless you want to split the action), touch *Same Game*.

The fifth game is the most challenging game on MERLIN and it resembles a competitive game called COMPUTER PERFECTION (page 00). It's called MAGIC SQUARE, and its object is to form an outside square (all lights in the central square of the playfield except the center light) of flashing red lights. You quickly learn that touching each button has an odd, if somewhat unpredictable effect on the other buttons. The game begins and buttons 1–5 and 7–9 (see diagram) are flashing. The natural start would be to press the dark button, number 6, and see what happens. Sure enough, it lights, but #3 and #9 now go dark. Try pressing number 4, and the whole left side goes out leaving only the center line of 2–5–6 and the right side's #6 flashing. Try touching number 8, and numbers 7 and 9 relight . . . and so on, until you light the outer square.

Experienced players of MAGIC SQUARE sense a very real logic to this insanity, but those who are not of the fold generally find that MAGIC SQUARE is among the most frustrating games ever devised. I am, as you might have guessed, of the latter group, although I can crack the game if I take pencil and paper and really devote myself to the purest form of concentration.

MINDBENDER is the last of the MERLIN games. The formula here is MASTERMIND-like combinations of up to nine digits, and the ability to not only guess the combination but to keep score on the very same playing field. It is a reasonably good version of the popular game, and, as always, it will be played most efficiently if you work with pencil and paper beside you.

For all of the wonder surrounding MERLIN, I can't help wondering myself why there are ten different buttons on the playing field and only six are used for game selection. MERLIN has captured my imagination, and I would have liked to see 4 additional games on the system, even for an increase in price.

MANUFACTURER: Parker Brothers, Beverly, Massachusetts

PRICE: About \$30

POWER REQUIREMENTS: Six "AA" batteries, or an AC adapter

RATING: * * * *

RECOMMENDATION: Parker's range for age is seven to adult, and the emphasis here would be slightly in favor of the kids. TIC-TAC-TOE, MUSIC MACHINE and ECHO were favorites with children, while adults seemed to tire of the more sophisticated games after a (long) time. (Despite the magic that MERLIN contained in 1978, the game system is nothing spectacular measured in today's market. Still, all of the games are fun to play, even if the world of colored lights and fancier sounds has caused it to lose a star.

*Mego Electronics®***FABULOUS FRED™**



FRED is one of the few electronic games that really seems to have a personality. He plays nine games and nearly all of them are fun to play. FRED has a little SIMON in him, a little MERLIN, and a brighter sense of humor than either of these fellows.

FRED plays all of his games using 9 large colored buttons, each of which lights and plays an electronic sound when depressed. It is through these lights that FRED communicates. In the first two games, each of the buttons holds a note on the scale (#1 is do, #2 is re . . . nothing unusual so far). Game #1 is an electronic organ, without enough notes or features to make it special. The second game is better—it allows the pacing of a tune using rests and eighth notes, and a complete playback of the composition.

Game #3 is a progressive memory game with 9 different colored buttons involved. For some reason, the additional sounds and colors make the game infinitely more fun than similar games, and the possible combinations go up

to 32 tones. The game is arranged on levels, so when you reach 8 tones, FRED gets all excited and plays a little fanfare. And so it is after 16, 24, and 32 tones. Once you reach 8, FRED figures you're getting pretty cocky, and so he allows only five seconds for each response. He even allows a mistake, after you get 16 in a row correct (but only *one* mistake—he's not all that generous).

Game #4 is a MASTERMIND game, executed with colors as well as numbers. The input process here is easy—just press any combination of three colors (two or more of which may be the same, as in red-blue-red), and FRED will tell you whether you scored one correct, or two correct. He's a little awkward and not as clear as he might be in talking back here, but we love him, and so we'll put up with his odd means of reporting the number of colors correct in the combination.

FRED starts to get down to business in the fifth game, which he calls SPACE ATTACK. The object here is to destroy enemy attackers before they reach their target (presumably their target is Earth). The attackers emanate from the top row of three colored buttons, which light when an attack is launched. Now an attack missile may follow one of two paths—it may either go straight down the first, second, or third column toward the bottom row, or it may move diagonally from the upper right to the lower left, or vice-versa. The object of the game is simple—tap the final button in the target's path before the target arrives. Example, a target starting in position #1 (the upper left) might go straight down the left side, or it might cut across on the diagonal, to the lower right corner. In a split second, the path is indicated (by which of the second-row buttons lights up), and you must react—and fast. A total of 25 invaders will be launched; you are not likely to destroy more than half of them without a good deal of practice.

Faster still is a game called CATCH THE COMET, which is perhaps the simplest of all electronic games to learn. Each of the nine lights flashes on for an instant, and you must tap the appropriate button before the light goes out. There are one hundred lights in the sequence, and you must be very, very fast to catch them all. The utter simplicity of this action game has made it a consistent champ in every single testing session where FRED was involved. And it is one of the few games where children and adults can compete fairly (once both have had a bit of practice), no handicap required.

Two weaker games, both using the random mechanism, nearly complete the package. ROULETTE is simply a matter of starting the colors on a random sequence, and watching the sequence slow to a stop. If you "bet" on that number/color on the betting layout (provided), you're a winner. And in the case of BASEBALL, where each number is assigned a baseball event (#1-triple; #2-out; #3-double; #4-out; and so forth), one player starts the sequence by pressing *Pitch*, and the other stops its random motion by pressing *Hit*. A baseball field and playing pieces are provided.

SUBMARINE HUNT is the only truly dull game on FRED—using three

moves, players must determine where a sub is hidden. The logic is rather like unraveling tic-tac-toe (which would have been a better game to complete the set of 9 than this), and it isn't much fun. But then you can't have everything.

FRED is comparatively large as electronic games go, coming in at about the size of a hardcover best seller. The game is incredibly durable (most of us beat it to the ground when playing CATCH THE COMET, and still FRED comes up smiling), and stands up even to a group of twelve year olds. One might initially object to the noises—they are a little loud (FRED likes to be heard)—but you can adjust to them. (It would be better if Mego allowed us to adjust FRED, with a volume control).

MANUFACTURER: Mego, New York, New York

PRICE: \$50–\$60

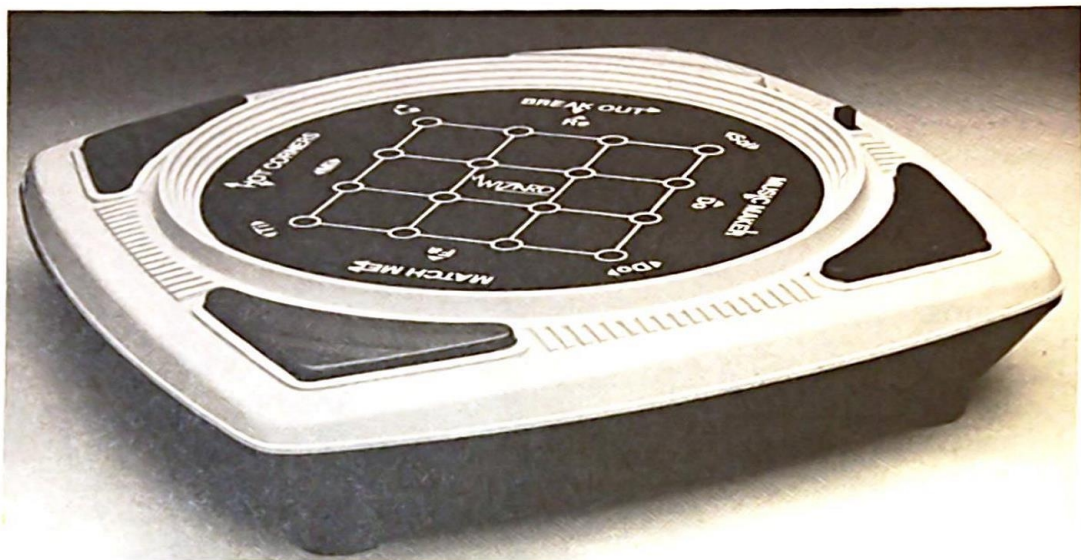
POWER REQUIREMENTS: Two "D" Cells *and* one 9-volt battery

RATING: • • • • ½

RECOMMENDATION: This is one of the few games that can truly be fun for the whole family. Mego recommends ages six to adult, which is accurate, although some children's games will prove inappropriate for adults and vice versa.

Waddington's House of Games

WIZARD™



The WIZARD is a four-game desktop system which requires memory, speed, agility, and concentration. It is a game of colors, easily played (and adored) by children. All games are played using the four colored corner buttons (red, yellow, blue, green), and two of the games utilize the grid of red blips at the center of the game. Each colored button begins a game—red starts HOT CORNERS, green starts BREAKOUT, blue starts MUSIC MAKER, and yellow starts MATCH ME.

BREAKOUT is the most unique game on WIZARD. Two to four players compete in a speed/memory fete, working a blip through a maze. With four players, the game becomes particularly intriguing, as each must recall the precise combination of turns used by competitors before guessing the latest directions in the ruse.

HOT CORNERS is an action game of great appeal to children. Each player "guards" a corner of the playfield, and reacts to blips headed toward the owned corner, in much the same way as an electronic baseball batter reacts to a "pitch." It is fast, simple, and a favorite in all my game-test sessions with children.

MATCH ME is nothing extraordinary—it is one of the many progressive memory games on the market, similar to Atari's TOUCH ME, Milton Bradley's SIMON, and a few others.

MUSIC MAKERS, to be used with an accompanying songbook of 30 selec-

tions, uses the four color-coded buttons to play simple electronic notes and tunes. It requires some patience, since half the notes require young Beethovens to press two buttons at once.

WIZARD promises eleven ways to play four games. In most cases, the variations are simply recommendations to allow three or four players to share functions normally played by one or two players.

MANUFACTURER: House of Games, Elk Grove, Illinois

PRICE: \$45-\$50

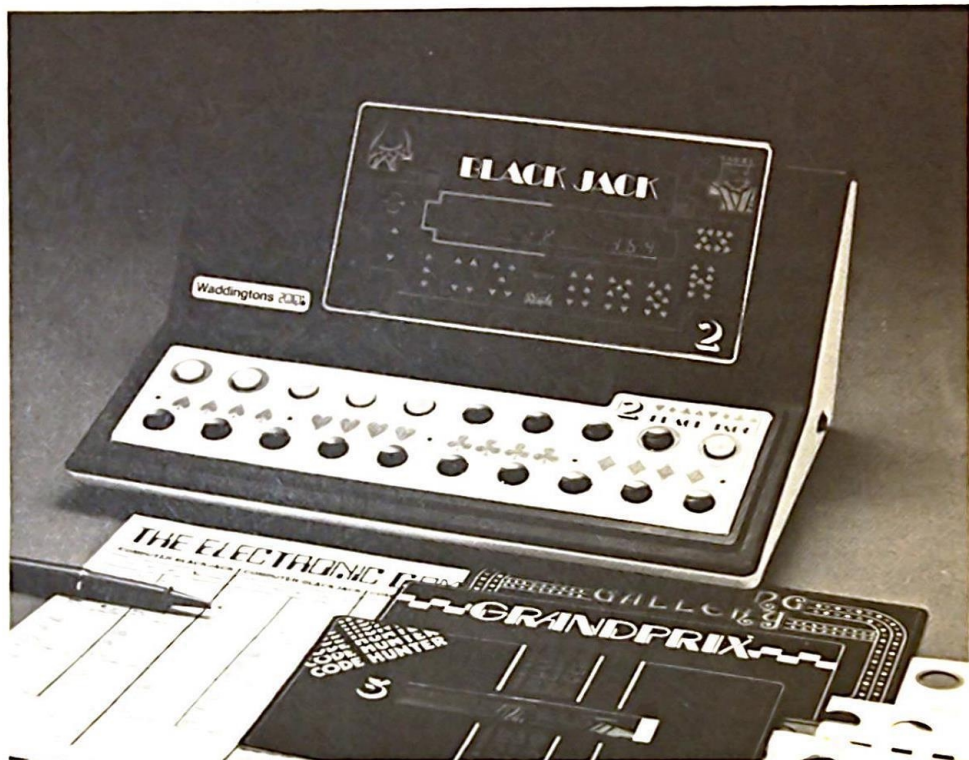
POWER REQUIREMENTS: Six C batteries, or AC adapter

RATING: Adults: *
Children: ****

RECOMMENDATION: There is little magic here for adults, but kids love this game.

Waddington's House of Games

THE GAME MACHINE™



Waddington's first attempt at a multi-game system based on calculator technology offers four games, each one rather simple, and few truly engaging. Waddington has already improved upon this model with a new desktop called GAME MACHINE 2, and with a hand-held version of the unit called simply MINI GAME MACHINE. You can see either at your local store.

You'll still see this item sold in many stores, and so it is worth some brief note. Four games are offered, each one played on a twenty-button keyboard and a twelve-digit readout. Not all buttons are used for every game.

SHOOTING GALLERY does use all buttons, as a pattern of flashing LED readouts runs across the display in either a zig-zag, circular, or random fashion. The idea of the game is to press a corresponding button as the lit blip passes certain points on the screen. It is a reaction game, and a very basic one at that.

BLACKJACK is creditable, but rudimentary (latter GAME MACHINES allow

more complexity), as one set of dealer and one set of player cards are dealt, and the player takes hits in hopes of avoiding a score over 21. (The new version allows insurance, doubling down, etc.)

CODEHUNTER is a fine version of four-digit MASTERMIND, with one clever element added to the normal fare. In Waddington's CODE HUNTER, players can press a button and review their last 1, 2, 3, up to 8 moves. This is a welcome addition; for players with poor memories it is a godsend.

GRAND PRIX, the fourth and final game, is terribly confusing, and the game itself is really too fast to be much fun. As the name implies, GRAND PRIX is a race game, much like the MATTEL AUTO RACE in concept, where a car shifts lanes and avoids collisions in order to make the best possible score. Action can be slowed by depressing the gas, and sped-up (Heaven forbid) by depressing the brake. While this action is totally illogical, it does provide some degree of control over the game's action, if only to slow it down.

The gimmick in all of these games is the very clever use of the now commonplace 7-segment readout (the calculatorlike numerals which appear via lit and unlit segments), wherein unusual combinations of these segments create entirely new images for game playing.

THE GAME MACHINE can also be used as a four-function calculator (add-subtract-multiply-divide).

MANUFACTURER: House of Games, Elk Grove, Illinois

PRICE: \$40

POWER REQUIREMENTS: Six size "C" batteries, or AC adapter

RATING: * 1/2

RECOMMENDATION: Buy the later models GAME MACHINE 2 being a dramatic improvement. MINI GAME MACHINE is a hand-held version of the unit reviewed above.

Milton Bradley Electronics®

OMNI ENTERTAINMENT SYSTEM

Owning an OMNI is rather like having a living, breathing game show in your living room. Vincent Price asks questions about the movies, and four players lock in their answers. Sportscaster Pat Sommerall conducts a sports quiz and comments on the players who answer correctly, while OMNI tallies your score before your eyes.

The OMNI unit, large enough to cover the top of a bridge table, is designed for up to four players. Each player sits behind a piano-style keyboard, which is used to input answers to every possible variety of question. Those questions, frequently posed by a celebrity, are played from a prerecorded 8-track cartridge which pops right into the console. By switching from track to track, someone like Vincent Price can congratulate player #3 for answering a particularly tough question correctly. And in other games, the multi-track switching can be used to adjust game difficulty to players' ability.

The physical unit is a handsome one, bordered on each of the four sides by a keyboard. There are eleven buttons on each keyboard, numbered 0–9 and *. The buttons are triply labeled: by numbers, by colors, and by letter groups (ABC, DEF—like your telephone). And in some games, like the SESAME STREET quizzes, an overlay fits neatly over the keyboard element for non-readers (and other special uses). At the top of each keyboard sits a two-digit readout, for scoring most games. And in the center of the unit sits a volume control (a much-needed device on most electronic games), along with a channel-selection switch used to find specific games on specific tapes.

The OMNI system is packed with one sampler tape, which includes selections from other available cartridges (sports, music, movies, and general information). Each of the cartridges offers between three and four hours of play, but you'll be able to play most games only once (after you play once, you'll know all of the answers). Pat Somerall hosts SPORTS TRIVIA, FOOTBALL QUIZ and BASEBALL QUIZ. Vincent Price asks the questions on MOVIE TRIVIA and TV TRIVIA. Other cartridges include spelling games, party games, mystery melodies for identification, PASSWORD PLUS, JEOPARDY, and SESAME-STREET QUIZ. A QUICK QUIZ completes the baker's dozen, with more cartridges promised for future play.

OMNI is an exceedingly handsome game, with brushed aluminum panels, and a truly attractive design. The unit will, incidentally, play your 8-track tapes when you're not using it to play games.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: Approximately \$100, cartridges extra

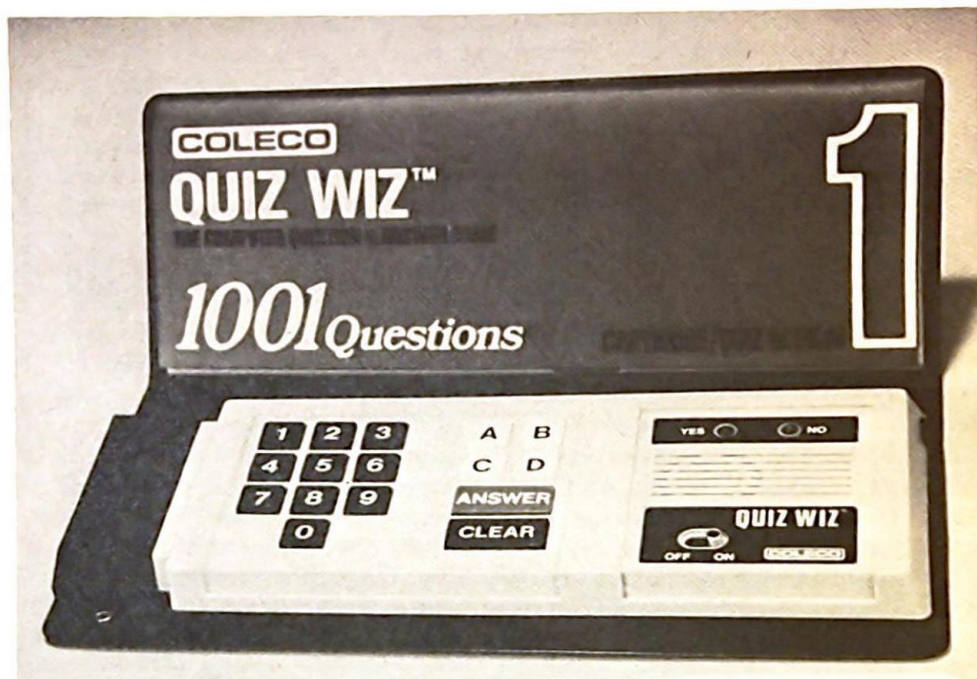
POWER REQUIREMENTS: Plugs into the wall, no batteries used.

RATING:

RECOMMENDATION: OMNI ENTERTAINMENT SYSTEM is mainly an impressive array of hardware. Milton Bradley's consistent level of quality so far as games are concerned will likely make the cartridges very appealing for the long run. They're off to a good start. Ages eight to adult, which means that anyone who can understand the keyboard can play these games (although game cartridges will obviously be matched to player interest and ability).

Coleco

QUIZ WIZ™



Product of Coleco Industries, Inc.

Coleco's question-and-answer computer is really much more of an electronic quiz book than it is a true electronic game, as you will see as you read the description. When you open the package, you'll find two distinct units. The first is a typical electronic keyboard console, with buttons for 10 digits (0–9), four more for answering A, B, C, or D (all questions are multiple choice), an *answer* button, and a *clear* button, a *yes* light, a *no* light, and a small speaker. The second is a large-sized wallet, equipped with a quiz book (1001 questions) and a built-in receptacle with that particular quiz book's circuits. When you snap the keyboard console into the quiz book's receptacle, you're ready to start answering questions. Here's where QUIZ WIZ becomes less a game and more a book of questions.

First, choose a question by number, and key in the digits. Let's try number 208—so we type 2, 0, and 8. The machine does not react, does not even tell us whether it's working or not. Shrug of shoulders, then continue. Press an answer: "GEPETTO is _____'s father. A. Snow White's, B. Hansel's, C. Goldilock's [sic], D. Pinocchio's—so we press D, and then *answer*, and the *yes* light blinks. If we had answered B, the *no* light would have blinked. It merely confirms the right answer, and lets you fish until you've come upon it.

For the next question, we must again key in each digit, 2-0-9 (it would be helpful if QUIZ WIZ could just let the player answer, rather than requiring a new keying in of each and every question number in sequence), and again he blinks yes when the correct button is pressed.

Scoring in QUIZ WIZ is manual, and you'll find score sheets at the back of the question book. It merely checks answers, an art long ago mastered by those who thumb through quiz books to the answer section. Sure there's a benefit in having instant response to each question, but the expense seems rather dear to have a machine that only does this and nothing more.

Coleco is constantly introducing new quiz books and accompanying electronic wallets for QUIZ WIZ. At last count there were twenty different cartridge wallets, each equipped with 1001 questions. Here, as of press time, are the twenty current entries:

#1 - 1001 QUESTIONS—general information; comes with the electronic keyboard unit, #2 - THE WORLD OF SPORTS, #3 - MOVIES AND TV, #4 - PEOPLE AND PLACES—famous personalities and places in modern history, #5 - TRIVIA, #6 - MUSIC AND BOOKS—the literary works of the past and the present, #7 - MATH MANIA—mathematical problems, puzzles, and games, #8 - THE BOOK OF LISTS—questions from the best-seller, #9 - GREATEST SPORTS LEGENDS—based on the TV series, #10 - SUPER HEROES, #11 - DISASTER—WHEN NATURE STRIKES BACK—by the editors of the *Encyclopedia Britannica*, #12 - THE OCEAN—MANKIND'S LAST FRONTIER—also from *E.B.*, #13 - ENERGY—THE FUEL OF LIFE—also from *E.B.*, #14 - HOW THINGS WORK—FROM AEROSOLS TO ZIPPERS—from *E.B.*, #15 - NATIONAL BASKETBALL ASSOCIATION—questions about teams and team players, #16 - NATIONAL FOOTBALL LEAGUE PLAYERS' ASSOCIATION, #17 - MAJOR LEAGUE BASEBALL, #18 - GUINNESS BOOK OF WORLD RECORDS—from the book, #19 - THE PEOPLE'S ALMANAC #1 AND #2—from the books, #20 - SHERLOCK HOLMES AND OTHER FAMOUS MYSTERIES.

MANUFACTURER: Coleco, Hartford, Connecticut

PRICE: \$25—for Master Unit and Cartridge/Quiz Book #1
\$7.95 for each additional quiz book

POWER REQUIREMENTS: One 9-volt battery, or AC adapter

RATING: **

RECOMMENDATION: There's really nothing extraordinary here that could not be provided by quiz books in paperback, available at less than half the price. For ages six to adult—but the age range really depends on the subject matter (most of the questions are good and tough, like a well-written quiz book should be).

Mattel Toys®

THE ELECTRONIC CONNECTION™



© 1980, Mattel, Inc., Hawthorne, California

A positively brilliant concept for a children's game system, the ELECTRONIC CONNECTION is a witty adaptation of electrical circuit theory, applied to the world of games. All of the games are played on a blue plastic console, into which specially imprinted cards are inserted. The artwork on these cards—mazes and the like—is specially treated to carry a very low-powered electrical signal. Your soft lead pencil, when touched to the cards in the console, completes an electrical circuit. All cards are designed (encoded) so that their circuits initiate various sound effects, so you may play a tune (on a trumpet or slide trombone card), hear a motor during an auto race, or simply match tones to verify correct answers.

Twenty game cards are provided, including several mazes, a game of "hangman," multiplication tables, even baseball, billiards, submarines, and a game of ESP.

You may buy additional pencils at your local stationery store. You may use a vinyl eraser to clean some of the pencil marks from the cards. All cards can be stored in the hand-held unit's internal compartment.

MANUFACTURER: Mattel Toys, Hawthorne, California

PRICE: \$35–\$40

POWER REQUIREMENTS: One 9-volt battery

RATING: ★ ★ ★ ★ ½

RECOMMENDATION: Fun for everyone, but children tend to adore this game, especially young ones, ages five and up.

Milton Bradley Electronics®

MICROVISION™

Milton Bradley has combined the portability of hand-held games with the versatility of video games in a well-designed series of games which come under the heading of MICROVISION. The game itself comes in two parts—a master component, which houses most of the electronics and a small liquid-crystal display, and a series of individual cartridges which include specific controls and the necessary electronics for each individual game.

In order to buy MICROVISION games, one must first buy the master component, which includes one cartridge called BLOCK BUSTER. The MICROVISION component is constructed with the liquid-crystal display, the pressure-sensitive keypad, and a dial-type controller. The BLOCK BUSTER cartridge plugs into an open space directly on top of the display screen and the pressure-pad, creating various designations on the display, and specific functions for each button on the control pad. Different cartridges, as we will see, use different numbers of buttons, and different formats on the display screen. Some games use the dial, and others do not.

Each of the games is played by either watching or controlling elements on the display screen, which is in fact 16×16 small squares arranged in a silver grid. Combinations of squares on the grid are used to create everything from numbers to submarines, from bowling balls to laser beams. It takes a little imagination, along with the proper light (these games are best played in direct light—even diffuse room light may be a little dim), and very good closeup vision to play MICROVISION. Given all of these requisites, along with a fast hand and a quick mind, you'll find that these games are among the finest hand-held on the market today.

A word about the ratings of each game: The physical MICROVISION set is nothing more than a piece of hardware, just as a television set is nothing more than hardware so far as video games are concerned. Each of the games available to MICROVISION users is reviewed separately, including the BLOCK BUSTER game, which is always bought with the basic unit. Additionally, MB plans to issue a BASEBALL and SEA DUEL cartridge to bring their total to eight game cartridges.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: (For basic unit and BLOCK BUSTER): \$40–\$60

POWER REQUIREMENTS: One 9-volt battery (with an open compartment for a second battery—a very good idea), no AC adapter available.

RATING: see individual games

RECOMMENDATION: see individual games

Milton Bradley Electronics®

MICROVISION BLOCK BUSTER™

Those who are familiar with the arcade and video game of BREAKOUT will recognize this ball-and-paddle competition. (See pages 252, 305). For the unfamiliar, the game is magnificently simple: control the paddle to hit the ball into a three-ply row of bricks. As each brick is hit, it disappears, and the idea here is to make all bricks (48 in all) vanish, partially because of paddle action and partially because of the ball's own momentum. It's precisely the sort of game that is learned in less than a minute, and requires hours of patience and practice to master. Nearly everybody who played the game, no matter what the age, would not leave this game alone. It is truly one of the most addictive action games ever invented. If your eyes can stand the occasional strain, you can literally play for hours and hours. Every time you "clear the board"—make all of the bricks disappear—a whole new set of 48 appears in its place. The folks at Bradley claim that their sons and daughters have held some informal competitions and scored as high as 725 points, which is very, very good. The highest scores reached in our test groups were in the mid- to high-100s, but we're still practicing.

BLOCK BUSTER can be played with one, three, five, seven or nine balls per game, and it normally sets itself to seven balls for the average players. Paddle size, normally three squares long, can be adjusted to only 2 squares, and ball speed can be either fast or slow. The easiest combination of these factors was more than challenging for all but the most skilled BLOCK BUSTER players, leaving us all plenty of room for improvement.

BLOCK BUSTER is controlled by the small knob at the bottom of the master unit.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: (Available *only* with main MICROVISION console)

POWER REQUIREMENTS: None (see MICROVISION master unit)

RATING: * * * * * (Maybe even more—it's one of the best games I've ever played.)

RECOMMENDATION: Buy it.

Milton Bradley Electronics®

MICROVISION PINBALL™

Once you've mastered BLOCK BUSTER, give PINBALL a try. The layout is different, but the play's pretty much the same. Once again, choose your paddle size, ball speed, and number of balls you wish to play (all such characteristics are identical to those used in BLOCK BUSTER), and press *go* twice to start the game. The playfield is simple, uncluttered, showing only four darkened blips, each to be called a "bumper". Using a paddle, the idea here is to knock the ball into paths that will cause collisions with the stationery bumpers as frequently as possible. Each hit in the early part of the game is worth one point, and then after you've hit the same bumper five times, you'll score two points for each hit. If you manage to get all four bumpers into this "bonus" two-point mode *while playing the same ball*, every bumper hit jumps in value to three points.

Your total score flashes on the screen each time you lose a ball.

Frankly, this game isn't very much like any pinball machine I've ever played, but this is a very addictive game. It's one that you will play for hours and hours—just trying to beat your last score. Scores here, incidentally, tallied in the high 100's for better players, and under 50 for the beginners. With hours of practice, the sky's the limit (actually 999 is the limit, after which the game starts counting again from 1).

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: About \$15

POWER REQUIREMENTS: None (see MICROVISION master unit)

RATING: * * * * 1/2

RECOMMENDATION: BLOCK BUSTER, the other speed-reaction game for MICROVISION is more engaging. You will, however, find those who have learned to prefer this game to the other. Again, an eye strain, but most say it's worth it.

Milton Bradley Electronics®

MICROVISION BOWLING™

Using a thoroughly different play format for MICROVISION BOWLING (in fact, a format that's quite similar to the other electronic bowling games in this book), Milton Bradley has created another fast-reaction game of target shooting. MICROVISION BOWLING is the fastest bowling game you'll ever play—and, unfortunately, one of the least intriguing.

We begin by telling MICROVISION how many players will bowl (the score can be kept for one or for two), and how fast (2 speeds) the action is to be. Press the now-familiar *go* button, and get ready. A ball chutes down the side of the alley, and then across the length of the foul line. The ball moves back and forth along the line until you press *bowl*, and if you do so at the precise moment, you'll score a strike. With a little practice, you'll score a strike every time on the "slow" speed, and a bit too often on the "fast." It's all a game of pressing the *bowl* button when your ball is in line with the "pins," and this is a skill too easily mastered to make the game interesting. Nearly every frame contains a mark, even at the "fast" speed, even for those who are normally "not very good at electronic games." There are no curves, no hooks, no strategy elements at all.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: About \$15

POWER REQUIREMENTS: None (see MICROVISION master unit)

RATING: * *

RECOMMENDATION: Try it before you buy it; perhaps you'll find the magic that was lacking in our testing sessions. (Note: younger children, whose timing coordination is still being perfected, are the only ones who consistently score varied totals in each frame.)

Milton Bradley Electronics®

MICROVISION STAR TREK™ PHASER STRIKE

This is a little bit like the earliest arcade video games, where a gun at the bottom of the screen could be pointed in several directions in order to shoot the airborne enemies flying above. PHASER STRIKE offers four such enemies, who may be played in individual games (their lengths vary, making this a skill variety element), or together in the "C" mode (for "changeable" targets). A series of ten to ninety targets may be displayed per game, preset by the player. And three different gun positions—straight up, diagonal left and diagonal right—are available for the battle. A choice of two speeds completes the preset cycle.

This is a simple game—just move the gun to shoot the target (you only need one button—the gun movement is immediately followed by the shot). But it's hard to play perfectly. The playing field is small, and the targets, especially the smaller targets, can come into view very quickly. You can start with the 4-square targets (nothing more than a single-line of 4 lit squares), and practice until you're playing the 1-square targets at the fastest possible speed. You won't want to put this down once you've begun, because you'll see how quickly you progress from an awful player to a really competent marksman. And besides, it's fun.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: About \$15

POWER REQUIREMENTS: None (see MICROVISION master unit)

RATING: *** ½

RECOMMENDATION: For all ages. Incidentally (as if you didn't know), this has nothing to do with STAR TREK whatsoever.

Milton Bradley Electronics®

MICROVISION™ CONNECT FOUR

This MICROVISION game is based on a Milton Bradley "box game" of the same name, and if you play it for a while, you'll realize that you're playing a most intriguing variation on the most basic of games, tic-tac-toe. The action of the original game, wherein two players filled circles within a grid by dropping discs into chutes, is duplicated nicely in this version of CONNECT FOUR, and, as the title implies, these discs are strategically dropped in an effort to string four of your own discs in a row.

You can play either against another partner or against a supremely competitive computer. Let's play against the computer and you'll see how it works. We set the game to the one-player mode, and the skill level to the #1 slot (the second slot allows the computer a greater opportunity to win), press *go*, and see a solid disc appear in the upper left corner of the screen. By twisting the dial at the bottom of the MICROVISION unit, the solid disc moves across the seven columns on the board. (Each column has six rows, making the board a 7×6 matrix of 42 circles). When the *drop* button is pressed, the disc falls to the bottom row within the column selected. It is now the computer's turn (initiated by pressing the *comp* button), and he/she/it drops a two-color disc in a strategic position, always remembering that the object of the game is to string four in a row of your own disc, either up and down, left to right, or on a diagonal. It's my turn, and I can either block the computer's lineup, or continue building my own line. This continues until either player or computer connects four, and thereby ends the game.

The computer is a most capable opponent, and so the game is captivating for very long periods, especially for adults. I found that playing with the computer for as long as I did allowed me to develop a very real edge in playing the game, and I found it more fun to play against the computer than to play against human competition. Others found this to be the case as well.

Perhaps the only criticism that might be levied here is the fact that the playing field's painted lines (which are part of the cartridge insert and rest several millimeters above the actual display panel in the master component) cast serious shadows on the field, and make it rather difficult to discern one's playing pieces from one's opponents'.

MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: About \$15

POWER REQUIREMENTS: None (see MICROVISION master unit)

RATING: * * * * ½

RECOMMENDATION: For all ages, each of which will find their own level in a very good game.

Milton Bradley Electronics®

MICROVISION VEGAS SLOTS™

Action on the MICROVISION casino's slot machine is very similar to the action played on many hobbyist computers—the gambler starts out with a pot (100 points), and watches the chance rolling of symbols cause that pot to shrink and to grow with the whims of the gods. This one-arm bandit is no different from the rest, even if the strange configurations of block diagrams which appear on the three wheels don't look very much like cherries, lemons, watermelons or limes.

Slots are the same no matter where they're played. Just set your odds, set the unit for one- or two-player action (it will keep score for two players), press *go*, and then *pull*. Each time you score you'll see the winnings, and each time you press *display*, you'll see your accumulated total thus far.

Three games are offered, each with a slightly different twist. For one or two players, but most effective as a time killer for one.

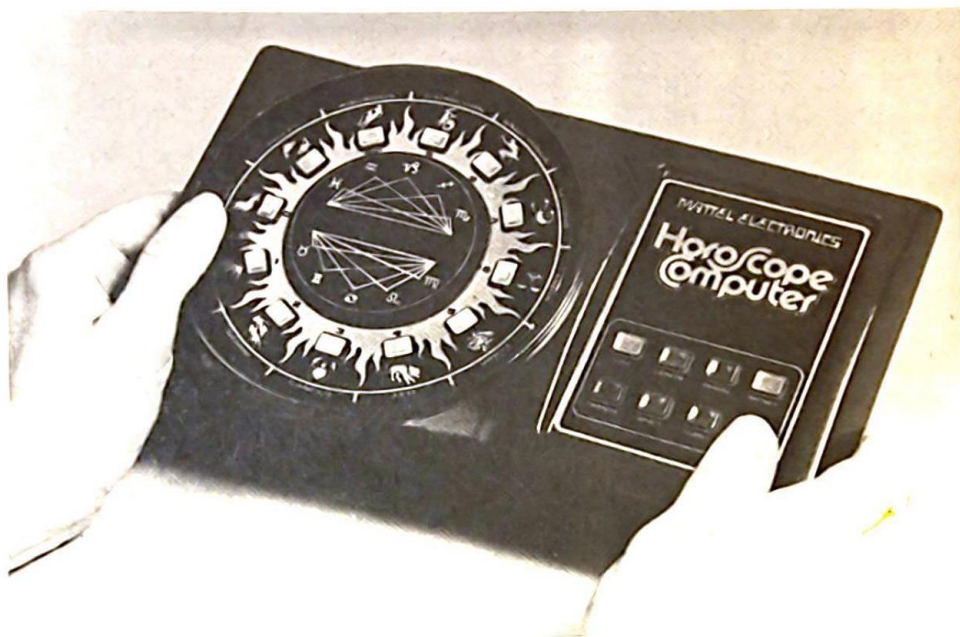
MANUFACTURER: Milton Bradley, Springfield, Massachusetts

PRICE: About \$15

POWER REQUIREMENTS: None (see MICROVISION master unit)

RATING: * * *

RECOMMENDATION: This is hardly the first MICROVISION cartridge I'd run to buy, since it isn't complex enough to really hold an intelligent person's interest for much longer than five minutes every day or so.

*Mattel Electronics®***HOROSCOPE COMPUTER™**

© 1980, Mattel, Inc., Hawthorne, California

HOROSCOPE COMPUTER is a silly little device that may or may not have any great affect on your life or your future. But it is fun to type in your sign and see what the machine says about any one of eight different life aspects: love, career, travel, money, family, creative, friends, spirit. And it's just about the easiest of these contraptions to operate.

You start by entering today's date (or the date about which you require information), by pressing the appropriate buttons around the zodiac (the buttons do double duty—in this phase, they are used for date entry). Next, on command from the computer readout at the center of the zodiac, enter your sign. I'm a Libra, so I press the Libran key. The readout prints: "Aspect," and I move over to the buttons on the right. I press "Travel," and the computer tells me to "Plan Now". On the matter of my career for this date, I'm told to "Hang In." Advice for treatment of friends: "Go For It".

As you can see, this plastic genie is not terribly verbose, but then, if your advice is good, who needs verbose? Nearly all readings are under a dozen letters, and so this computer-of-few words keeps his advice quite succinct.

For those who wish to check compatibility with current or future mates, a single switch allows the entry of a second astrological sign. All aspects are then to be treated as advice for the two of you.

The HOROSCOPE COMPUTER holds the secret to all astrological charts through December 31, 1987. Chances are, however, that you will tire of this gimmick long before that date.

MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$40-\$45

POWER REQUIREMENTS: One 9-volt battery

RATING: **

RECOMMENDATION: Adults, even at those mythical adult parties where Clarence dons a lampshade, will not find much to hold their interest here. Perhaps children who are just becoming familiar with the world of forecasting, or preadolescents whose world is young love and romance comics, will find a real friend in the HOROSCOPE COMPUTER.

*Fundimensions™***SOUND GIZMO™**



SOUND GIZMO is not a toy, and not a game, it is a small device that makes noises electronically. It is a little bit like an electronic organ, with many of the capabilities of an electronic synthesizer. Nine different sounds, including "jet plane," "phaser," "helicopter," "explosion," "gunshot," "train," "tone," "motor," "siren," and "helicopter," can be played, twisted, and redesigned by varying "speed," "pitch," and "volume." If you're clever (and you read the instructions), you can teach the machine to use its "jet plane" mode to sound like a snare drum, and its "siren" to sound like a telephone busy signal. Or so say the instructions.

I tested SOUND GIZMO, with adults and with children, and almost nobody could identify the sounds it made with any degree of accuracy. When I explained that the high-pitched tone, for example, was supposed to be a bird call, the general reaction was a dubious "If you say so." The flexibility and the distinction between sounds leaves something to be desired.

MANUFACTURER: Fundimensions, Mt. Clemens, Michigan

PRICE: About \$25

POWER: One 9-volt battery

RATING: * * 1/2

RECOMMENDATION: SOUND GIZMO in the hands of children is a sure-fire way to lots of noise. In the hands of an adult who has it all (including adult friends who are willing to allow him to do whatever he pleases), this could be the cause of some very personal satisfaction.

CHAPTER 6

Video Games

All of the games in this section are "video games," which means they require both a television and a customized computer terminal. Any television screen will do, but the games are easiest to play if the set is color, and if it is 12" (measured diagonally) or larger. The computer terminals are manufactured by the game-makers themselves, so you'll find that a Mattel game cartridge can only be used with Mattel equipment, Atari cartridges with Atari consoles, and so forth. These consoles cost over \$100 each. All of the individual games described here can be bought for about \$20 (some slightly higher), but in every case, the cartridge is a small black plastic box, which holds computerized data about the game, to be decoded only by the manufacturer's master component. Many of these games are essentially home versions of the video arcade games, with lots of new designs for play on your home screen.

The field of marketers has thinned in the past few years. Before you buy any master computer unit, consult your retailer and ask about the availability of software (the cartridges are known as software in the game industry). Before you buy, find out how many games he regularly stocks, how often the manufacturer releases new game cartridges, and the likelihood of serious catalog deletions. Only Atari and Mattel have had consistently dependable distribution of new products. You'll find asking questions will assure you that what you may want later will still be available.

Video/computer games fall into four distinct categories, each involving entirely different computer hardware. The first, and most primitive, is the single-game console—the format originally used to introduce PONG and its variations in the middle seventies. Most manufacturers are phasing out this format, and despite low prices, this is not a very wise investment since repair is difficult. The second category was introduced (and later discontinued) by Fairchild in 1977—the "cartridge programmable." Atari's VIDEO COMPUTER SYSTEM, Mattel's INTELLIVISION, Bally's VIDEO ARCADE, Magnavox's ODYSSEY SYSTEM 2, and APF's M1000 are all cartridge systems, all typified by an easy-to-operate master console and games that can be bought in booklike packages. Each of these is described in detail in this chapter. All of these systems vary in terms of capability, but all are special-purpose computers designed to do just one thing: play games. The third category broadens the game system to something much more impressive: a full-scale home computer. Atari's 400 and 800 PERSONAL COMPUTERS are designed to accept their own game cartridges, as is the Mattel INTELLI-

VISION keyboard component. The APF IMAGINATION MACHINE is also a home computer that plays games as one of several functions. Some of the other personal computer systems, Radio Shack and Apple, for example, can also play games from preprogrammed cartridges or cassettes, but the overall focus of these computers is outside the realm of games. The fourth category applies only to those who program their own household computers. Virtually all of the world's games can be adapted for play by computer, as long as you have the skills needed to program. There are several excellent books which offer detailed instruction for programmers. Consult your local bookstore for books about computer programming, or, more specifically, about programming games. Certain hobbyist magazines may be even more helpful.

As you read this chapter, please remember that the games described can generally be used only in one distinct master system. Read carefully before you buy, and again, you'll find the greatest availability of game cartridges for the Atari, Mattel, APF, and Magnavox systems in the "game-only" category. Atari has a separate group of game cartridges for their personal computer system, but Mattel's INTELLIVISION cartridges can be used in either system. Other computer systems for the home, including the *Apple II* and the *Commodore PET*, have also been designed to accept game play. For further information about these two computers, see your local home computer retailer.

Atari®

VIDEO COMPUTER SYSTEM™



Introduced in 1977 by a company with a wide variety of coin-operated arcade games in its library, the Atari "VCS" console currently accepts approximately 40 cartridges carrying about 500 different games with more games to come.

The physical console itself is designed to sit near your black-and-white or color television set. One cable is attached to antenna contacts (explained in the instructions) and a second cable is used for power (AC only). The console consists of six switches: one on/off, a player difficulty switch for each of the players, a color/black-and-white switch (all Atari games play just as well in color as they do in black-and-white—this is NOT true of all competitive systems), a switch to select one of the 100 games that may be available on any single cartridge, and a reset switch. The cartridge slot is well designed and easy to use.

Three controls are available in the VCS—a "joystick controller," which is an eight-way stick shift used in the majority of the games, a "paddle controller," which is effectively a small steering wheel, and a "keyboard controller," with 12 buttons, similar to a push-button dialer on your telephone. The keyboard is relatively new, and Atari has not yet developed many games which require its use. The other two have been around from the start. Each game

cartridge (described in the following pages) requires one particular set of controllers.

MANUFACTURER: Atari, Sunnyvale, California

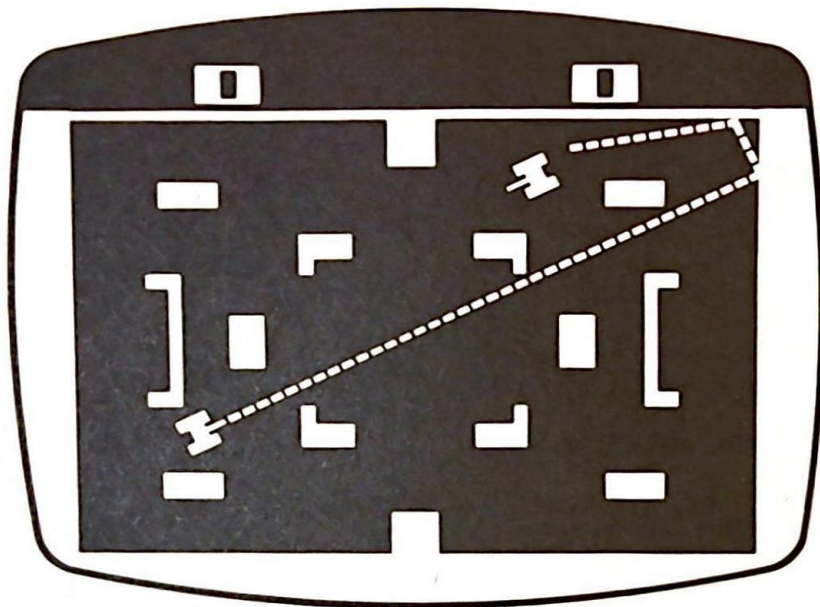
PRICE: Usually \$150–\$175, sometimes discounted below this range

POWER REQUIREMENTS: AC only

RATING: See individual game cartridges

RECOMMENDATION: Cartridges are generally available throughout the country, and with Atari's aggressive stance in the business of coin-operated games, you can expect to see their already healthy library become more exciting as time goes on. The PERSONAL COMPUTER, however, may start taking the spotlight away from the VCS. Consult your retailer as to the expected release schedule of new games for the VCS.

Atari®

COMBAT™

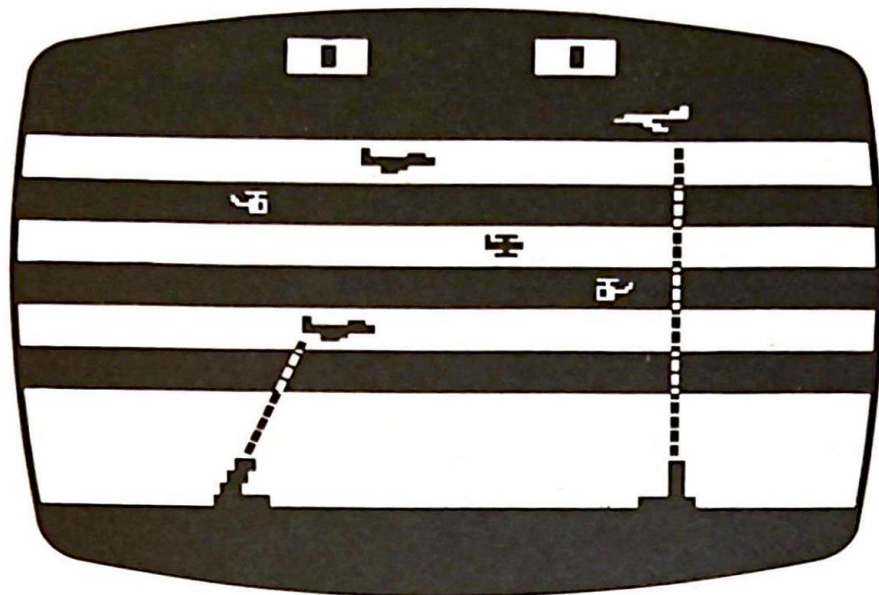
Some of Atari's earliest arcade war games have been combined for a possible 27 games, and variations, in a single cartridge. TANK is among the best with its blocklike implements of attack which are moved around various mazes with your joystick. Players shoot at each other's tank by pressing the red button on the joystick controller, with a choice of "guided missiles" or "straight missiles," on either "easy maze" generated at random, "complex maze," or "open field" (no maze at all—just two tanks on a blank screen.) The mazes are to be maneuvered through, as well being blockades used for protection from enemy fire.

The TANK-PONG variations allow missiles to bounce off maze elements or outside borders. "Billiard hits" are only scored as successful shots when banked off a side or maze piece. These elements, and those listed above, are also used in conjunction with "invisible" games, where both tanks are invisible except when shooting or when hit.

PRICE: About \$20**RATING:** *****RECOMMENDATION:** If you like war games, this is as good as any.

Atari®

AIR-SEA BATTLE™

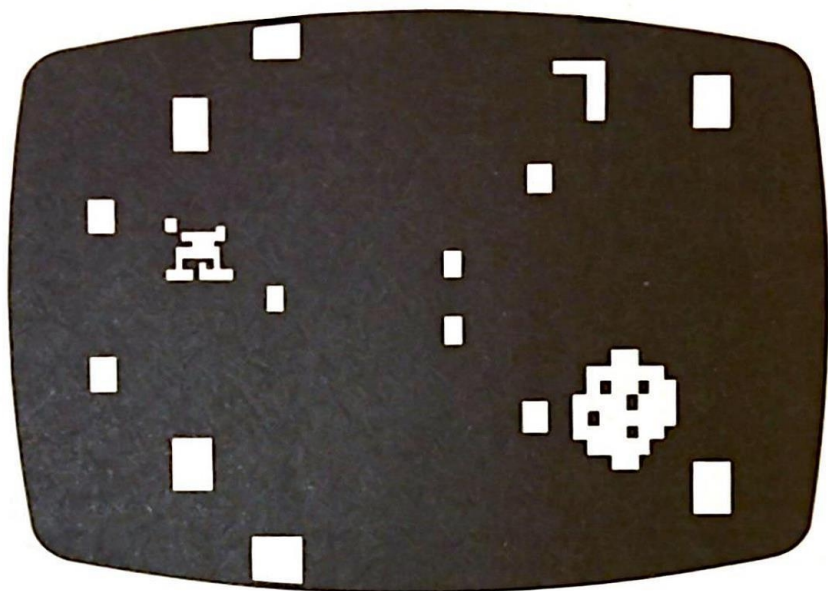


Twenty-seven shooting games, with all sorts of wartime instruments of destruction are the basis of the games on AIR-SEA BATTLE. Games are only slightly different from one variation to another and are grouped in six categories: ANTI-AIRCRAFT (airborne targets), TORPEDO GAME (with ships), SHOOTING GALLERY (rabbits, ducks, and clowns), POLARIS GAME (similar to the TORPEDO GAME, with slightly different underwater attack capability), BOMBER GAME (like POLARIS GAME only with airborne attack power), and POLARIS VERSUS BOMBER GAME (one player is the ship, the other is the jet fighter). In every case, a small gun angle is controlled in an effort to hit as many targets as possible. With assorted mines, scoring variation and the usual bag of tricks.

PRICE: About \$20**RATING:** ****RECOMMENDATION:** Again, we've learned to expect more control and more interesting variations. An oldie.

Atari®

STARSHIP™



Your TV screen becomes the window of a Starship in this cartridge. At center screen is a precise-looking target cross-hatch to be used for centering targets before shooting. Using your joystick, you can move the nose of your spacecraft up (which means the objects on the screen move down), down (they move up), to the left (they move right), and to the right (they move left). All of this takes a little practice, but it starts to make some sense after you've played the game a few times.

Your targets, which appear from far out in space and approach your starship with a speed that you select yourself, include a Star Fighter (one point), a Flying Saucer (two points), a Space Robot (three points), and, in two-player competition, a Space Module (also two points). The Space Module is controlled by your human opponent (it does not appear in the computer-as-competitor games), and its sole function is to keep away from your target (a practice made somewhat difficult for the Starship gunner because the Space Module can become invisible at will).

Nine different games can be played by varying the elements listed above. Games #10 and #11 are simply races through space, made more difficult by the occasional appearances of asteroids, which are programmed to collide with your ship and cause you to lose time (asteroids are equally bothersome in the first nine games). The final group of games are listed as LUNAR

LANDER games, having nothing whatsoever to do with the popular arcade game of the same name. This is a game of docking, where a Lander must be maneuvered in concert with the Moon, by either computer and human or two human players.

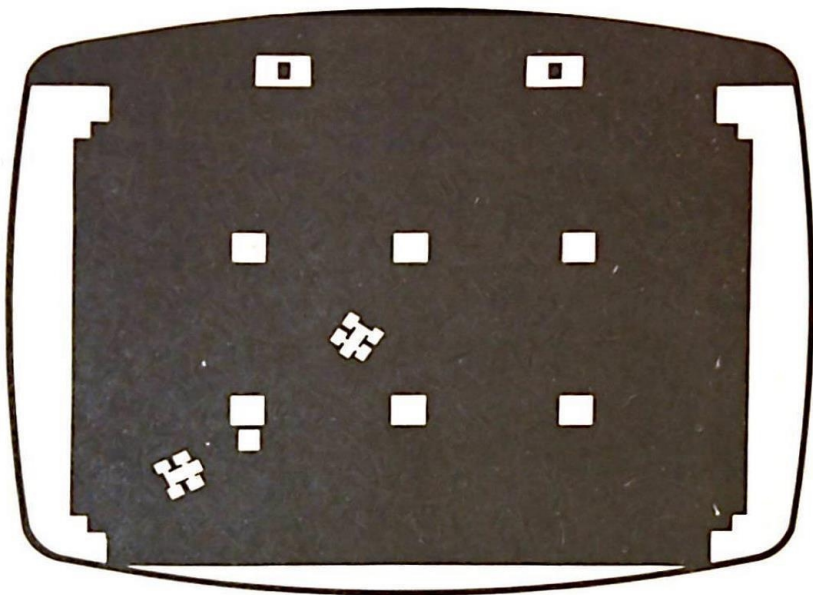
PRICE: About \$20

RATING: *

RECOMMENDATION: The rules are very simple, and the play is very hard, primarily because of the inaccuracy of the target area. Sometimes you think you've centered the enemy when you haven't, and vice versa. Try Atari's STAR RAIDERS on the PERSONAL COMPUTER SYSTEM—it's far better.

Atari®

INDY 500™



Atari's first attempt at a video racing game is still its best. This is full-course racing, laps and all, with quick-reflex car control provided by a specially designed (and specially purchased) Driving Controller. There are fourteen variations, most worth learning to play (you'll develop your own favorites—all of the games are pretty good).

Games #1 and #2 are Grand Prix lap games, which means that you just do your best to speed around the curves and cross that lap counter as often as you possibly can. The first game is for two players—the first to complete twenty-five laps is the winner. The second game is a time trial, for one player only (sixty seconds). Games #3 and #4 are the same as #1 and #2 respectively, but include a series of wicked turns called "Devil's Elbow."

The Atari arcade hit CRASH N' SCORE is the basis for Games #5–8. These games drivers try to crash into a small white blip that chases about the screen as often as possible. The number of hits and the amount of time required is the basis for scoring.

TAG is the children's game, played with electronic race cars. It is not the strongest game on this cartridge, but it is fun on occasion. Two different playing field obstacle courses make the TAG games, numbered 9 and 10, more interesting.

Games 11 through 14 are the most fun of all because they're played on a

very slick, icy surface. Car control is crucial, and skidding creates an enormous advantage for players who can really control their racers (and an enormous disadvantage for players who can't). A "Sprint" track and a "Rally" track, along with two-player games and time-trials.

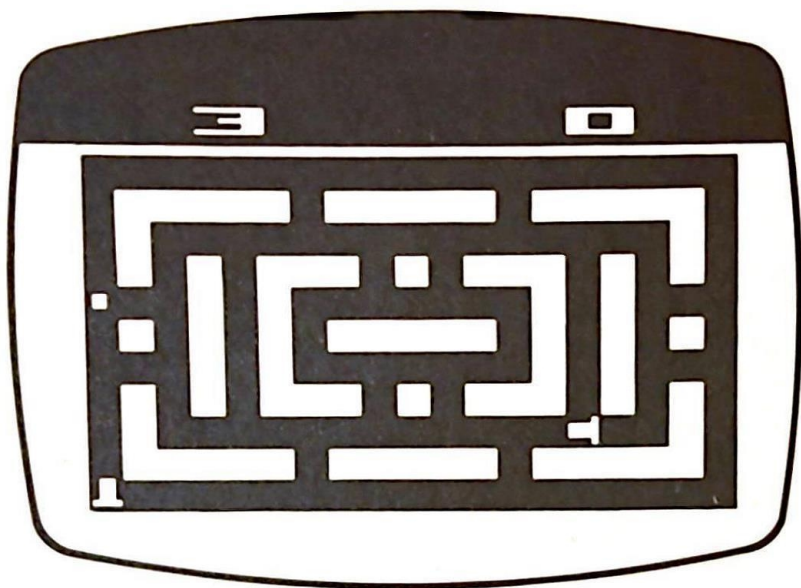
PRICE: About \$40

RATING: * * * *

RECOMMENDATION: This is one of the more satisfying video games available, adapted directly from a series of top-notch arcade games also made by Atari.

NOTE: The high price includes an additional set of steering controls.

*Atari®***SLOT RACERS™**



If you're expecting model car racing from **SLOT RACERS**, you've got the wrong game entirely. For reasons unexplained, this is a game of missile-bombing on the racetrack, with a series of different mazelike racetrack configurations to make play more interesting. Using your joystick, you snake your car around tough corners, stalking your competitor's car. When he's in range, it's bombs away—you'll score a single point for every successful hit. Twenty-five points wins the game. You might say that this is a **TANK** game, played with race cars. An odd combination.

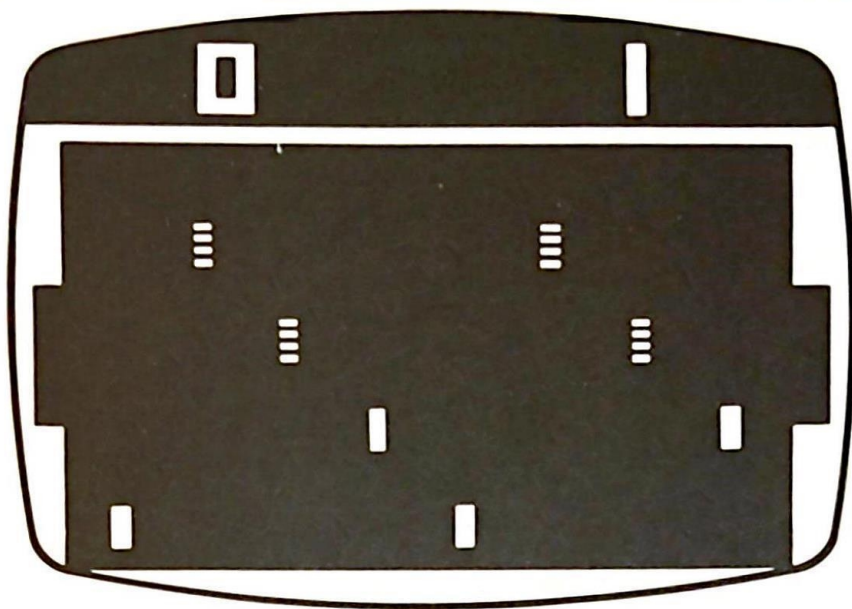
PRICE: About \$20

RATING: **

RECOMMENDATION: Try **TANK**—there's more action (and a lot more games on the cartridge).

Atari®

VIDEO OLYMPICS™



For those who still love a good game of PONG (or any of its fifty variations), it's all here in VIDEO OLYMPICS. PLAY PONG (like ping-pong—hit the ball with your paddle, and your opponent returns your shot), SUPER PONG (two paddles per side), SOCCER (PONG, with open goals on the extreme sides of the screen), FOOZPONG (PONG with two rows of three paddles on each side), HOCKEY (SOCCER with slightly different goals), QUADRAPONG (SOCCER with goals on four sides of the field), HANDBALL (PONG with rebounds), VOLLEYBALL (HANDBALL with a center net), or BASKETBALL (HANDBALL redesigned with baskets).

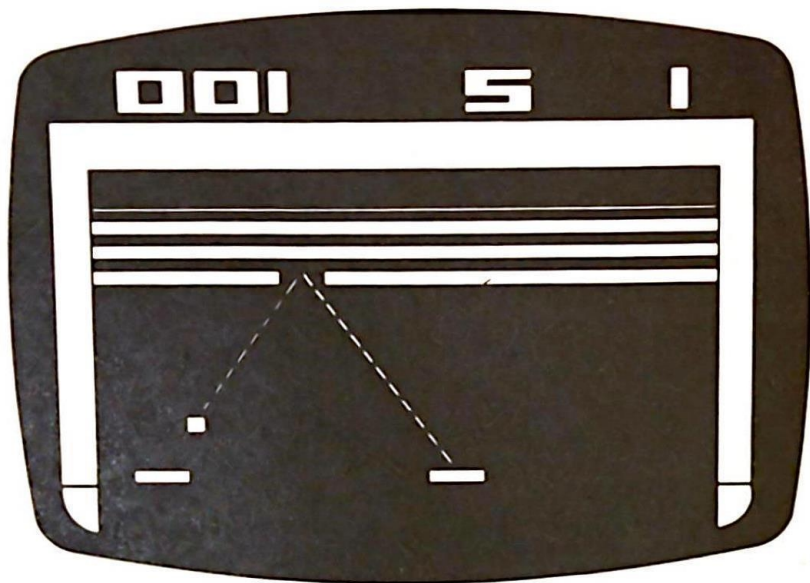
For one, two, three, or four players, "Whammy" to change angles or hits, "Catch," so the ball sticks to the paddle until it's released, or "Jump" for spiking the ball. You can vary ball speeds as well. Not all features are available on all games. Play with paddle controllers.

PRICE: \$20**RATING:** * 1/2

RECOMMENDATION: Games on screen have become more sophisticated than even the best of these offerings. The basic concepts here are only the groundwork for far more intriguing play.

Atari®

BREAKOUT™



The reigning king of the video game for several years, BREAKOUT is an extremely challenging, occasionally frustrating, always satisfying match between man and machine. The game itself is a derivative of PONG, the very first video game which simulated table tennis. In order to play, you must simply hit the ball whenever it comes your way. In order to play well, however, you must aim your shots, always trying to angle the ball so it strikes a new area on the screen. Each time you hit the ball, you actually bounce it into a brick wall, and each time the ball strikes a brick, that brick disappears from the screen. There are six rows of bricks on the screen, each of a different color, and as you work your way deeper into the game, you'll find that each row is worth more points for a maximum score of 864 points. This is achieved by clearing every brick from the screen, and then, as the brick field is re-shown, by clearing them all a second time.

Notice from the illustration that the bricks do not sit on the upper edge of the screen, but just below it. If you are able to angle your shot through a path of cleared areas, and bank it off the top of the screen, the ball will ricochet in the upper regions, clearing bricks from the top down. This pattern may end at any second if the ball bounces into a clear path as the ball comes shooting back to the paddle, ready for another return. If you do not return the ball, a new ball comes on screen. A total of five balls are played in each game.

There are twelve game variations: four with the basic game, four with a

clock timing your game, and four with specialized ball movement. In this group, the ball's path clears a series of bricks in line with the ball path, as opposed to a single brick as before. Each of these variations allows either the regular game, a "steerable" ball (after you hit the ball with the paddle, you have limited control of its path), "catch" where instead of merely returning the ball to play, you can hold it on your paddle, move your paddle, and release the ball elsewhere on the screen, or an invisible feature, wherein all bricks disappear between contact with the ball.

Played with one or two players, and two levels of difficulty based on paddle size.

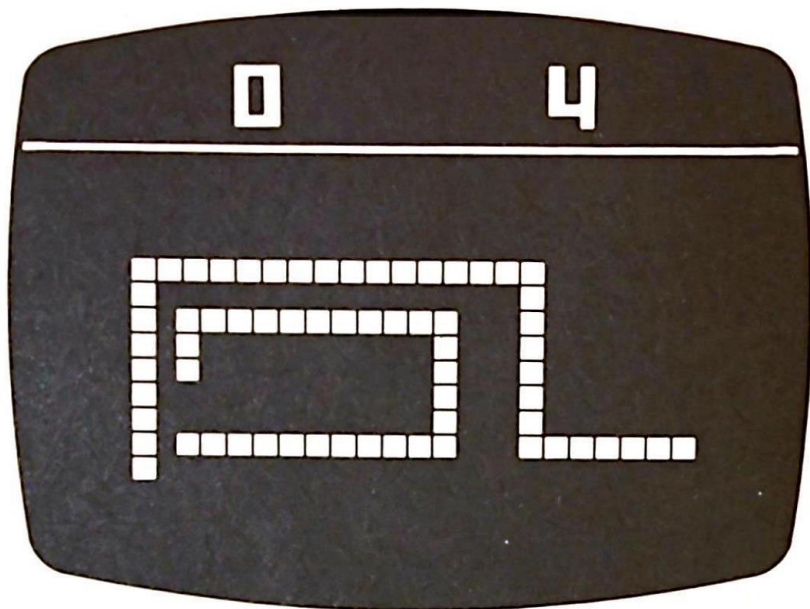
PRICE: About \$20

RATING: * * * * 1/2

RECOMMENDATION: The arcade version is reproduced nicely here; see the Atari 400/800 for a more advanced version of the game.

Atari®

SURROUND™



Again adapted from an arcade game original, SURROUND is a competition of sudden death, designed expressly for the video medium. Each player (one or two—better with two) starts out with a small colored block. By pushing the joystick to the right, the block moves right, leaving a visible trail where it has been. Joystick down, and the line leads down, joystick left, and the line continues left, always leaving a trail where it has been. Both players create lines simultaneously, always trying to draw their lines around territories occupied by their opponent. Each round ends as one player builds his line in a space already occupied by either himself or his opponent. The game moves quickly, so both players must react with accuracy always mindful of both long-range and short-range strategy.

Game features include "speed-up," where the line construction becomes increasingly fast, leaving little time to think and plan as you go, diagonal line construction, the ability to erase your line paths, and the option to run off one side of the screen and return on the opposite side. A "Video Graffiti" feature eliminates all speed, allowing players to draw their own designs using all drawing options, at their leisure.

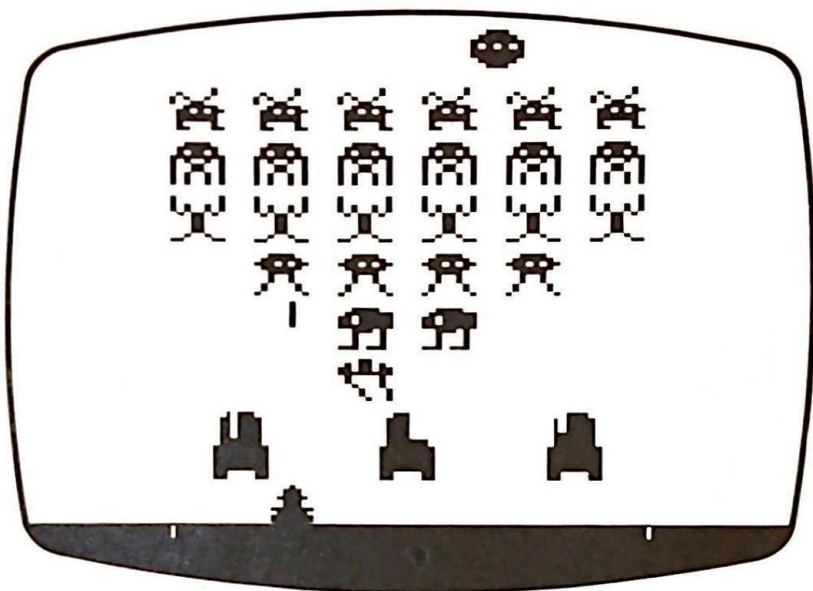
PRICE: About \$20

RATING: * * * *

RECOMMENDATION: The ability to react very quickly will make for the best games. Human versus computer games are not very interesting, since the computer does not react with a shriek or snide comment when a crash occurs. The game is best between equally matched players—more the case here than elsewhere.

Atari®

SPACE INVADERS™



This is the official, bona fide home version of the world's most popular video arcade game. The competition can be fierce when the Space Invaders, a dastardly flock of horrible aliens, attack your missile base. If you look at the illustrations, you'll notice six rows of six aliens, each in center screen, with three laser shields just below the aliens, and a single laser cannon resting at the bottom of the screen. The most valued member of the alien fleet, Command Alien Ship, flies above the aliens.

All of the aliens shoot laser bombs by dropping small cylinders down toward your missile base, while you shoot your laser back up at the evil 36, trying to pick them off one by one. Use your joystick to move your laser base and dodge enemy fire—a task made easier by hiding beneath the laser shields. The shields are valuable—they provide shelter from the storm of bombs. But they must be used with caution, for they can be accidentally destroyed by your own fire.

Each row of invaders increases scoring values—worth 5, 10, 15, 20, 25, and 30 points. The command ship is worth either 100 or 200 points, depending upon the game variation.

There are four variations available. MOVING SHIELDS adds an element of chance—the laser shields, once safe and secure, become chancy and even a little false in their value as protection areas. ZIGZAGGING LASER BOMBS

change the normally straight and predictable downward course of the alien bombs, making the dodge difficult, and sometimes nearly impossible. FAST LASER BOMBS is self-explanatory (and a particular challenge when combined with the zigzag feature). INVISIBLE INVADERS causes the alien force to disappear between your successful hits.

There are sixteen basic games on this cartridge, created by varying combinations of moving shields, zigzagging bombs, fast bombs, and invisible invaders. Fully 112 variations are created with basic game, two players alternating turns, two players shooting at the same time, alternately, and various two-player partnerships.

All missile-base movement is accomplished via the joystick, and all offensive shots are recorded by pressing the red button. This is a deceptively basic description of the game's action—you'll constantly be moving that missile base, because the alien lasers are constant, and bombardment comes from all sides. Your own attack mechanism will seem all but worthless against the rain of lasers from above at first, but a little practice and you'll be knocking off those aliens like an old pro—but keep an eye out for sudden attacks from behind. Those aliens are devious—and worse when fast bombs or zigzag motion is involved.

All in all, a highly competitive reaction game, and one of the best available.

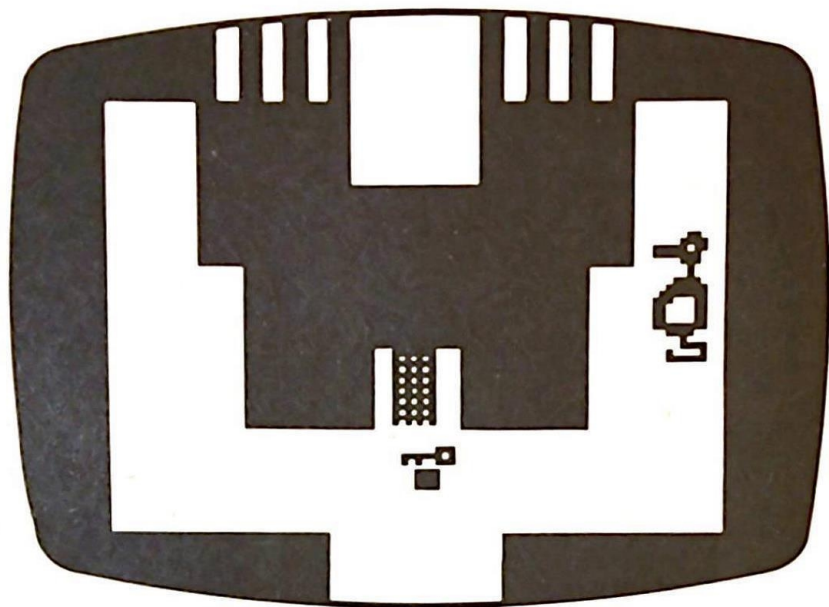
PRICE: \$25–\$30

RATING: ★ ★ ★ ★ ★

RECOMMENDATION: Lots of agility required here, heavy hand-eye coordination, and a real respect for the game. It's a good one.

Atari®

ADVENTURE™



Loosely based on the fantasy game of *Dungeons and Dragons*, ADVENTURE is a true fantasy video game. There's a fairly complicated fable involved here, a fable in which you will become the fairy tale hero if you are successful in avoiding Yorgle, Grundle and the awful Rhindle, the three dragons who are trying to foil your well-meaning attempts to find the Enchanted Chalice. Fortunately, in your travels through the mazes and courtyards and deep dark dungeons, you'll find a sword with which you may foil even the most dreadful dragon.

It all begins just outside the castle, as you start to look for the key—a search that may take you all over the kingdom. There are three castles, each of which is opened with a colored key (the golden castle with a golden key, the black castle with black key, and the white castle with white key), which are found by floating from room to room and maze to maze throughout the kingdom. You will find that this experience is most unlike the video games normally sold with this or any other system—when you leave a room, you literally float off the screen in one direction and enter another—and you're able to return to the original area simply by retracing your own path.

The search for the chalice can be a frustrating one, especially when you're caught in one of the mazes. But keep at it, for there is a grateful king waiting for its return.

Three skill levels are brought to play in the three games offered—the first is simplest, the second involves more catacombs, more obstacles, and even a Black Bat, who may be friend or foe depending upon your situation at the time, and the third simply makes the game harder to play by randomly placing dragons in most inopportune locations. You'd best start with the first game and work your way up, especially if you're new at this.

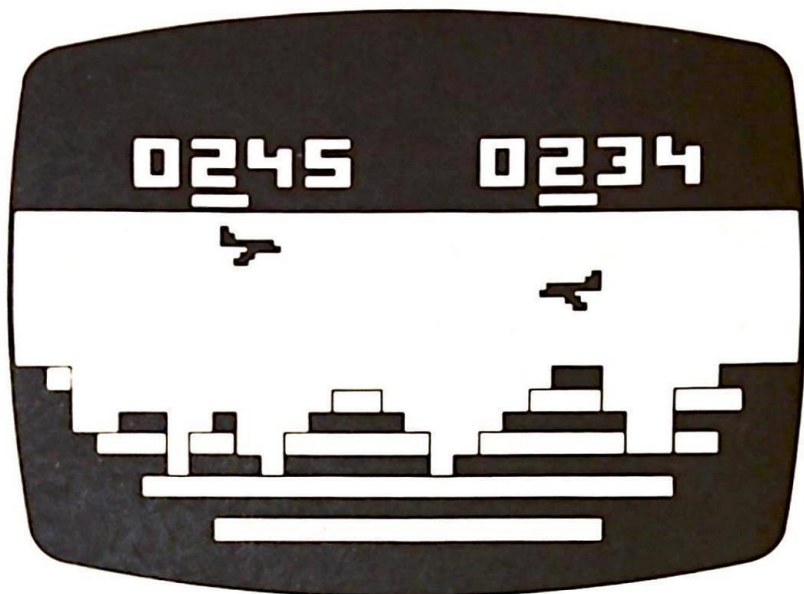
Incidentally, the reason you must watch out for the dragons is related to their devilishly good appetites. If they see you, they'll chase you and try to eat you. And once you're in the jaws of a dragon, you have no alternative but to be reincarnated—easily done by pressing the *game reset* switch. The *difficulty* switches, also on the main console, can be adjusted to allow the dragons to hesitate for a moment before nipping, if you so desire. (It's a little easier that way—you've got a chance to escape.)

PRICE: About \$30

RATING: ★ ★ ★ ★

RECOMMENDATION: This is a wonderful idea, carried off nicely by Atari. Patience is a virtue, especially in this kingdom—in your first dozen or two plays, you'll probably never even see the Golden Chalice. Stick with it—the game's fun once you've figured out what the instructions are trying to say.

Atari®

CANYON BOMBER™

This wartime diversion is rather like a game of BREAKOUT in reverse. Two planes (one controlled by Player #1 and the other controlled by either Player #2 or by the computer) cruise overhead, as layers of colored bricks sit in the canyon below. Press the red button on your Paddle Controller, and it's bombs away, with the bombs charging through several levels of bricks at a pass. In some game variations, the bricks will remain strangely suspended, ignoring the laws of gravity, and in others, the bricks will cave in, creating new patterns for each overhead bombing raid.

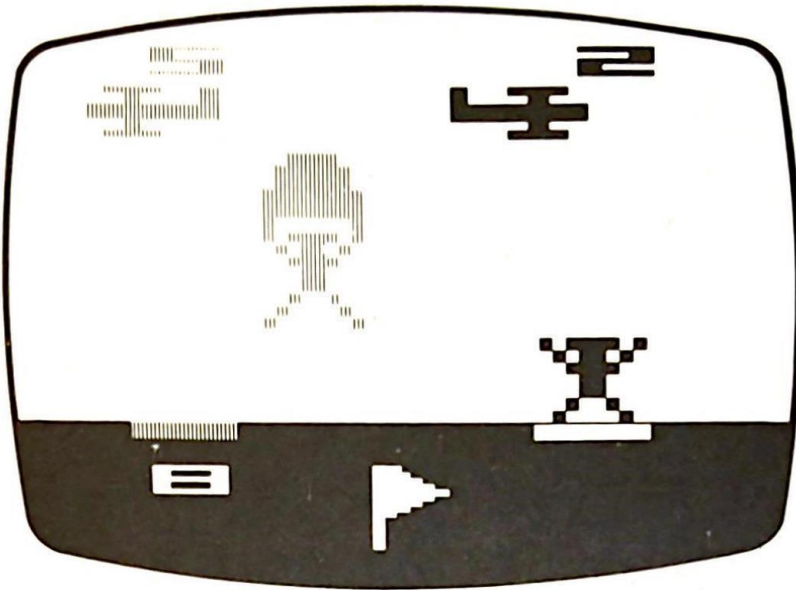
Also on this cartridge is a one- and two-player war game called SEA BOMBER. Using unlimited bombs, your helicopter shoots down toward the naval ships below. The variation here is that you must choose the ships you wish to bomb before letting loose, which is an interesting gimmick but hardly the basis of a game.

PRICE: About \$20

RATING: * * * * for CANYON BOMBER games
* for SEA BOMBER games

RECOMMENDATION: Worth a try, especially if you enjoy playing BREAKOUT. If you're like the videogamers who tested this cartridge, you will probably ignore the SEA BOMBER games. We did.

Atari®

SKY DIVER™ (play with joystick controller) _____

Parachute jumping, computer-style, is the basis of SKY DIVER. There are five games on the cartridge. No matter—they're all fun to play.

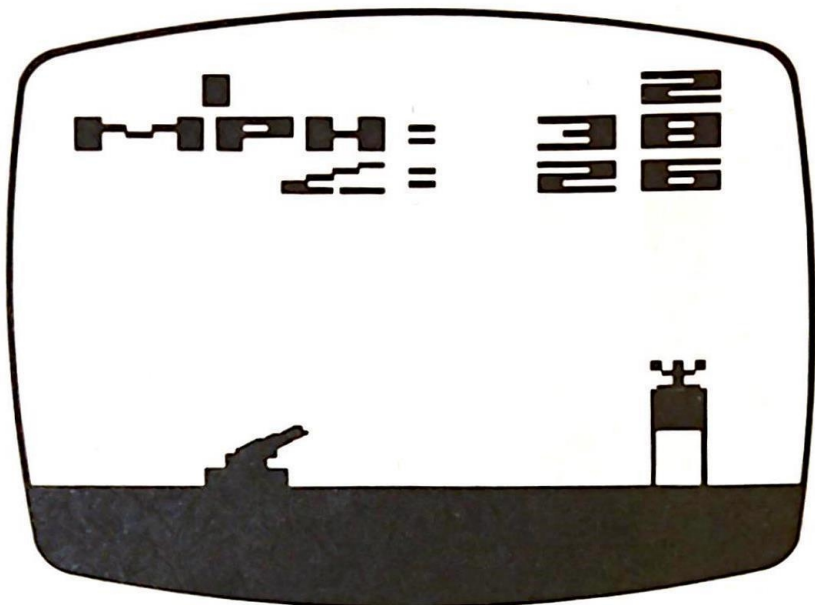
Each jump begins as your airplane floats across the top of the screen. Push the red button on your controller and your man jumps. Pull the joystick toward you and the parachute opens. Now maneuver the dive so that the chutist lands on the target area. And keep an eye on the wind sock—it tells you vital information about wind speed and direction.

Games #1 and #2 are simple jumps, with the stationary target pad in a new location each jump. In games #3 (big target) and #4 (small target) the wind factor is eliminated, and the target pads are moving constantly. In game #5, a single landing pad is shared by two competing chutists—it's a game of "chicken."

Scoring, at zero–eleven points for successful landing, is based on when you open the parachute. For one or two players. Use joysticks.

PRICE: About \$20**RATING:** *** ½**RECOMMENDATION:** Primarily reaction and timing—and a fun game for the development of expertise.

Atari®

HUMAN CANNONBALL™

On the left side of the screen is a small cannon, whose angle is controlled with your joystick. The angle of your cannon can directly affect the fate of a win-some fellow, who is about to be propelled into the air and (with a bit of luck), into a small water tank on the right side of your screen. Two joystick positions affect his speed, and four others can move the tank itself—so you are truly the master of this man's fate.

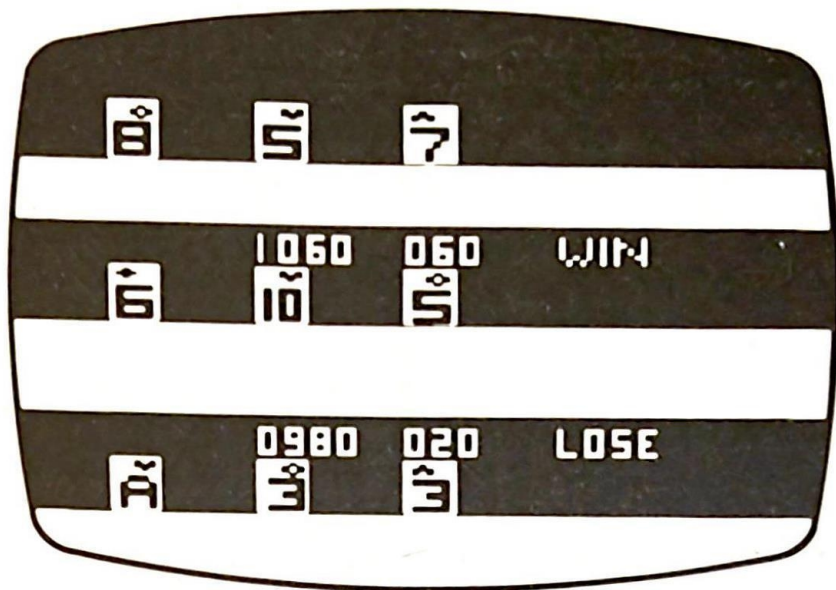
The eight games and variations are based on your control (or the computer's control) of the cannon's base position, the speed of the "projectile," the cannon angle, the movable water tank, and even a moving window, through which the lad must jump on his way to the tank in four of the eight games. Each of the games can be played by either one or two players. Scoring is based on the number of successes (and the number of flops). The difficulty switch sets the width of the water tank in all cases.

Wonderful sound effects make this blithe stunt a thoroughly comical diversion.

PRICE: About \$20**RATING:****RECOMMENDATION:** Play it, you'll love it. Fun for all.

Atari®

CASINO™



There are three betting games played with electronically displayed cards in this casino, played with your paddle controllers. The first of these is BLACK-JACK, a game frequently adapted for electronic/computerized play. With symbols difficult to discern, small white cards are shown on the screen beside the key words: *hit*, *stay*, *bet*, *double*, *insurance*, and *split*. Words, in abbreviated form, are shown by the computer when appropriate. You may select between *hit* and *stay*, for example, by merely twisting the paddle in one direction to get the word *hit* to change to *stay*, and in the other for opposite action. It's very simple, really. Betting is done in precisely the same way—twist the controller in one direction to increase the bet, and in the other to decrease the bet. This is a full-feature game, as you can see from the key words involved. Two sets of house rules are available by switching the *difficulty* toggle on the master console.

STUD POKER is a less successful game on CASINO, particularly because the pips used to indicate suits are so poorly designed. Unless you have a perfectly sharp TV picture, and you are sitting only a few feet from the screen, you probably won't be able to tell a club from a spade. This is a very challenging game as well, because the rules of STUD POKER (as opposed to DRAW POKER) do not permit replacement of undesirable cards. Bets are laid on the table after the second, third, fourth and fifth cards are dealt. This is a betting game, usually for high rollers.

POKER SOLITAIRE allows a single player to strategize through five poker hands at one time. A card is shown at the top of the screen, and it is up to the player to decide which hand would most benefit by the card. The paddle is then used to place the card, as a new card appears on top of the screen. It's easy for the first few cards, but even the best-planned game can be destroyed by the run of your luck.

Most games can be played by one player against the computer, or by two players. You can even play with three or four hands, if you buy a second paddle controller set.

PRICE: About \$25

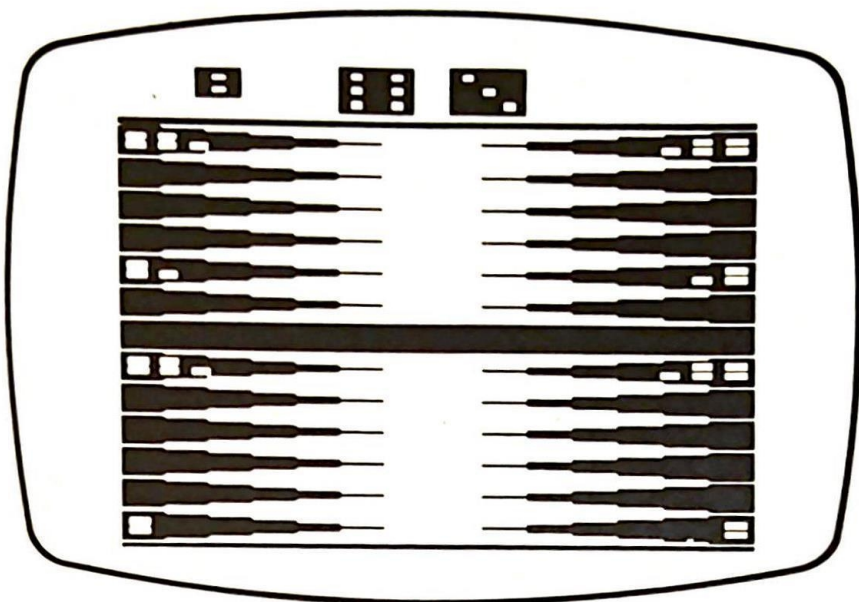
RATING: * *

RECOMMENDATION: The BLACKJACK is very good, but the display does not compare at all with the more costly INTELLIVISION version of the same game (page 00). STUD POKER was rarely a favorite, since most folks are accustomed to the relatively soft-core DRAW POKER instead (there is no DRAW POKER on this cartridge). POKER SOLITAIRE is more easily played on your bridge table with a deck of cards—the position indicator, which shows where you might drop the current card, is difficult to operate.

Note: Atari also makes a less expensive cartridge that only plays BLACKJACK. It sells for about \$20 and it is slightly more limited in the betting game (no INSURANCE, etc.)

Atari®

BACKGAMMON™



This is a simple version of the popular table game, with some liberties taken in gameboard design for the TV screen. All of the elements appear on the screen, complete with a controllable cursor which lights up the current points in play, and miniaturized checker blips which track around the board as they do in the table version. But there are some problems.

The board itself is physically crammed into the space available on the screen, causing a real bother whenever points must be counted. The checkers are too small, constructed so that they sit sometimes side-by-side and sometimes in groups on each point. The cursor moves both in a clockwise and in a counterclockwise direction, so that the confusion begun by the fact that the board sits sideways on the screen is compounded by a confusion (especially for beginners) as to the direction of play.

On the other hand, Atari provides a very clear instruction book with the game, detailing all features (they're all here, just a little small), from doubling to doublets. You really can learn how to play a good game of backgammon using this game—but experienced players will find nothing but frustration in this awkward design.

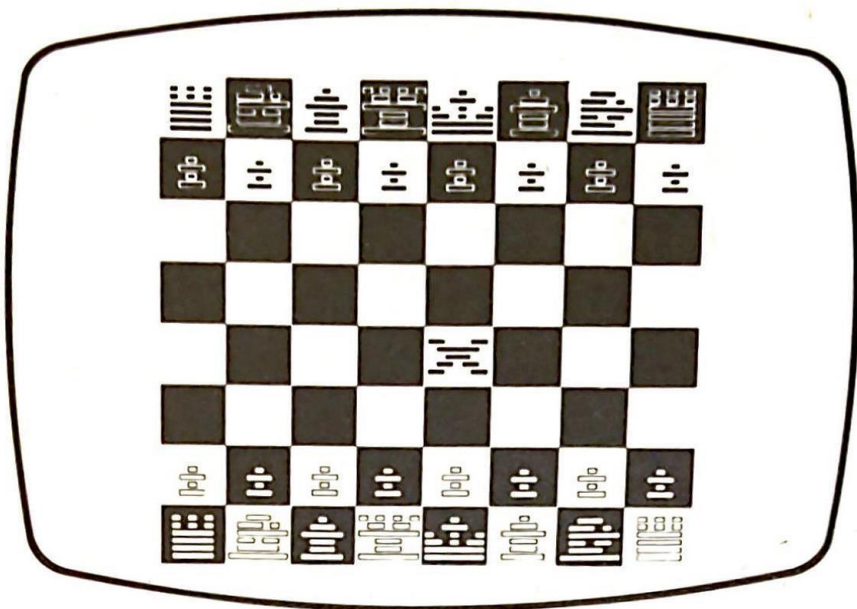
Atari's BACKGAMMON also plays a one- and two-player version of ACEY-DEUCEY, a backgammon variation invented in the Mediterranean that has achieved some popularity here through the years.

PRICE: About \$40

RATING: *

RECOMMENDATION: Play it before you buy it.

Atari®

VIDEO CHESS™

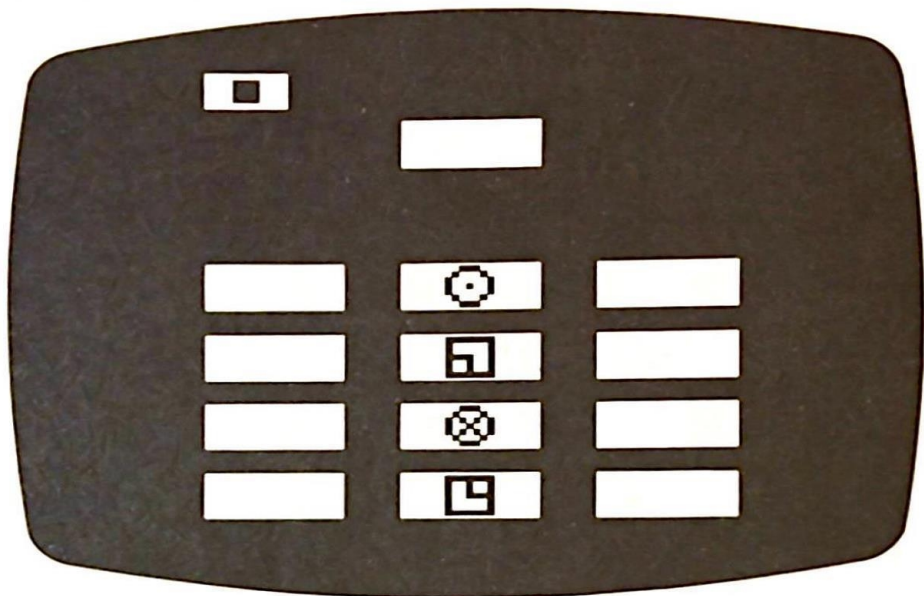
If you already own the Atari VCS, you might be interested in owning a computerized chess game for a comparatively modest price. VIDEO CHESS is more than an adequate competitor for most of us, allowing for 8 levels of play, ranging in response time from 10 seconds to 10 hours. All control is accomplished by moving a cursor (a small square of light) around the screen, taking control of one piece, and moving it to another square. The computer recognizes all illegal moves, and has provisions for castling and en passant.

You will find that VIDEO CHESS, aside from being a good opponent, is a good teacher as well. Level 8 is the mode best suited to the educational process.

You might say that VIDEO CHESS is comparable to many of the less-expensive (under \$100), dedicated computers made by Tryom, Fidelity and a few others.

PRICE: \$35-\$40**RATING:** * * ***RECOMMENDATION:** This is an interesting expansion on a system once bound to the realm of air battles and electronic tennis. It's a wonderful value for the price.

Atari®

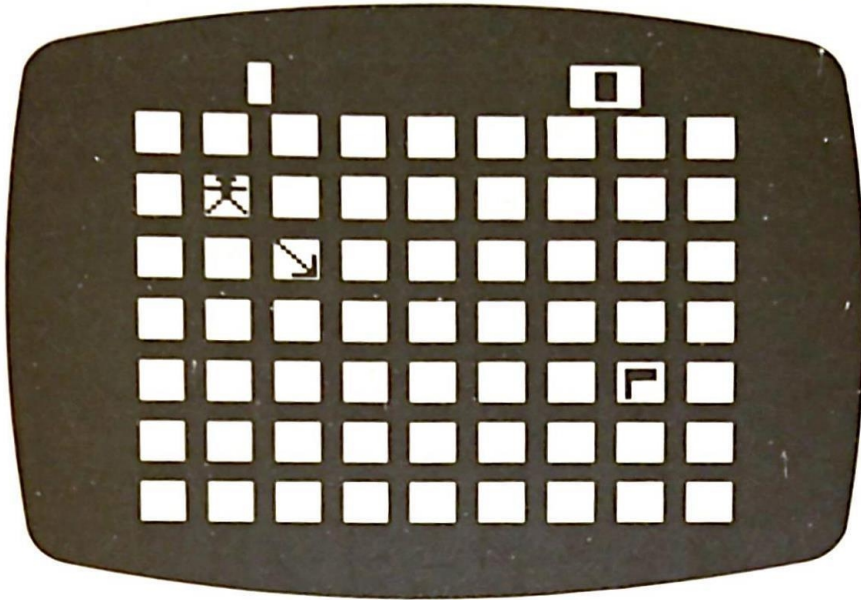
BRAIN GAMES™

This multiple-game collection was one of the first to really exploit the capabilities of the keyboard controller. There are six different games in all, each one requiring some degree of basic mental abilities. TOUCH ME is a game like SIMON, with either 6 or 9 possible tones to recall in a progressive fashion. COUNT ME is a similar game, with series of digits replacing the single ones used in TOUCH ME. PICTURE ME requires players to memorize a series of simple drawings in order, while the computer makes obnoxious noises in the background. FIND ME shows groups of objects on the screen, all of which match another—except one. The object here is to locate the oddball. ADD ME shows a list of numbers to be added before time runs out. PLAY ME allows anyone to use the VIDEO COMPUTER SYSTEM as an electronic organ (three songs are provided in numerical form: "Twinkle, Twinkle Little Star," "Three Blind Mice," and "Row Row Row Your Boat").

Most games have variable difficulty, nearly all can be played by either one or two players.

PRICE: About \$20**RATING:** ★ ★ ★ ★**RECOMMENDATION:** Fun for kids.

Atari®

FLAG CAPTURE™

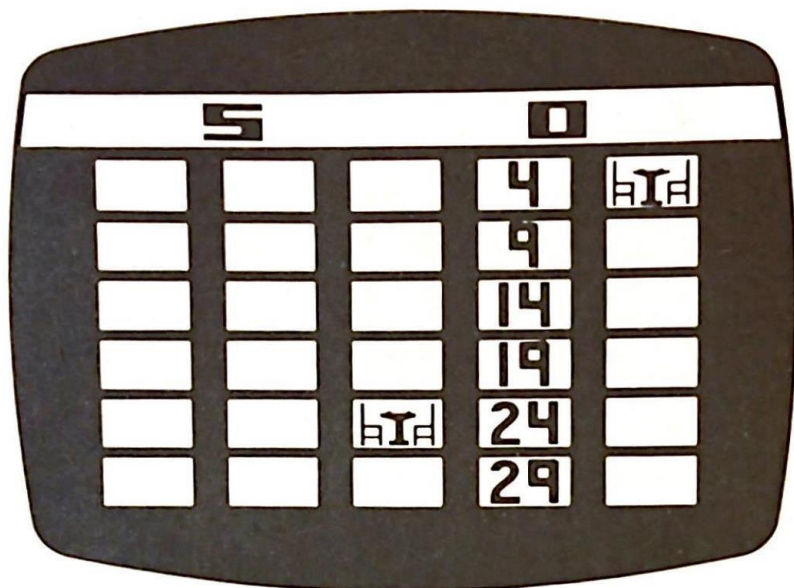
A flag is hidden in a 7 x 9 matrix of 63 squares, and your job is to find it. Your joystick allows movement anywhere on the board, and by pressing the red button, you can encounter either a Direction Clue (the flag is that-a-way), a Number Clue (the flag is "X" squares away), a Bomb (back to start), or the Flag itself. The game always involves finding the Flag as quickly as possible. This can be challenging, particularly in games where the flag itself moves.

Ten games and game variations are built on varying combinations of a moving flag, timed games, and the ability (or inability) of the flag to leave the right side of the field and reappear on the left.

PRICE: About \$20**RATING:** ****RECOMMENDATION:** Best for kids, an interesting diversion.

Atari®

HUNT AND SCORE™



HUNT AND SCORE is the matching game of CONCENTRATION gone computer video. You can play on either sixteen or thirty squares. Using your keyboard controller, simply type in the numbers of the two boxes you wish to match—if you're correct and they do match, you score either one point ("A" difficulty) or two points ("B" difficulty). The objects to be matched are all block drawings, from llamas to rangers to television sets to deers. With a "wild card" (matches anything) option. For one or two players.

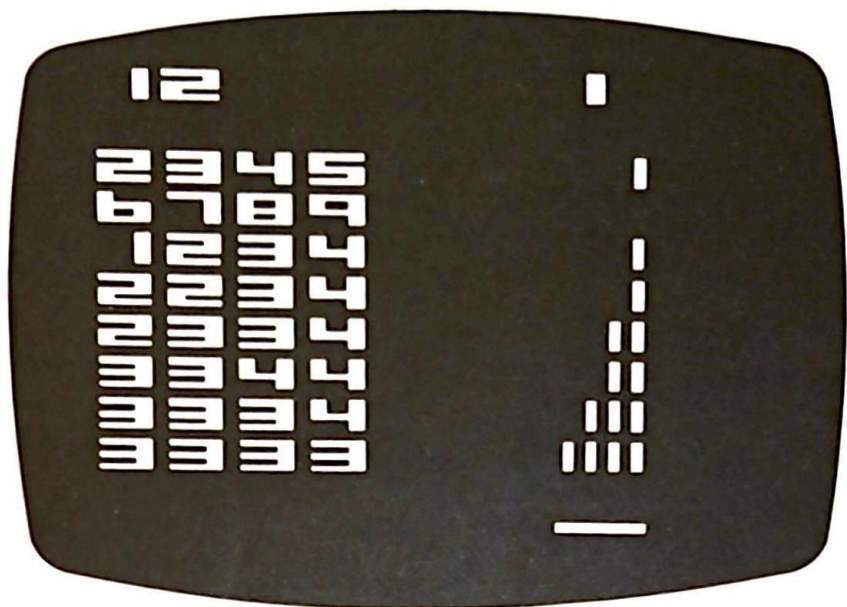
PRICE: About \$20

RATING: **

RECOMMENDATION: The game of CONCENTRATION is better on a TV with a rebus puzzle behind those matching squares, but this is as much fun as the card game. As a matter of fact, you could save some money and just buy a deck of cards—and have more matches to boot.

Atari®

CODEBREAKER™



MASTERMIND via computer—that's what CODEBREAKER is all about. There are two versions, a three-digit mystery code and a four-digit mystery code, operating with a field of 6 and 9 possible digits respectively. In the variations, you have a choice of players (1 or 2), and the ability to enter your own hidden combination.

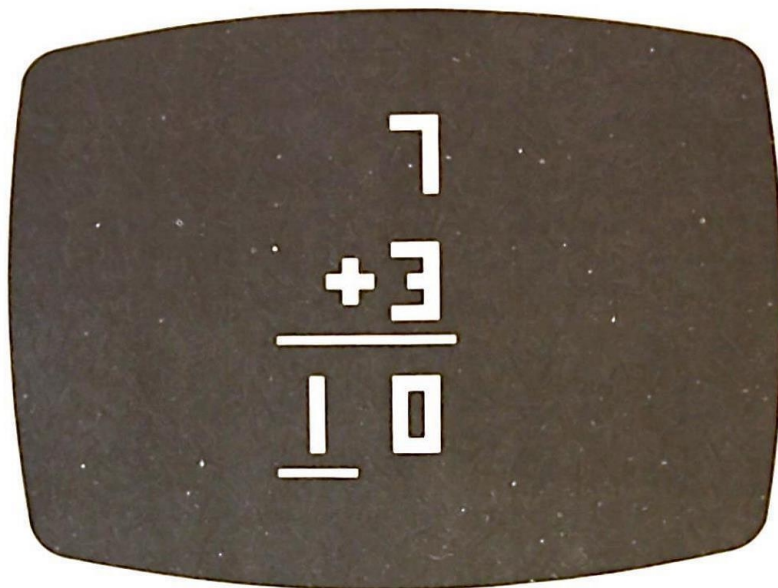
The more interesting game here is NIM, which is the old game of being the last to remove a pick from a large pile. In the Atari version, there are one to four stacks of objects. You take turns with the computer or with a partner removing any number of objects from any of the one, two, three, or four stacks. You must remove at least one object on every turn, and all objects that you remove must be from the same stack. You either play to avoid taking the last object, or to strive to remove the very last one—it's your choice.

For one or two players. Keyboard controllers required.

PRICE: About \$20

RATING: ★ ★ ★ ★

RECOMMENDATION: A more-than-adequate version of MASTERMIND (I wish there were longer codes available), combined with the terrific game of NIM—a very solid cartridge indeed.

*Atari®***BASIC MATH™ (aka FUN WITH NUMBERS™)**

Designed to be a video flashcard system for elementary school youngsters, BASIC MATH offers a battery of ten problems each in addition, subtraction, multiplication, and division. The first four "games" literally begin with a number of your choice and addition or subtraction drills based on your selected number. The second grouping of four games offers random amounts of problems in each arithmetic process.

Use joystick controllers to file through digits quickly.

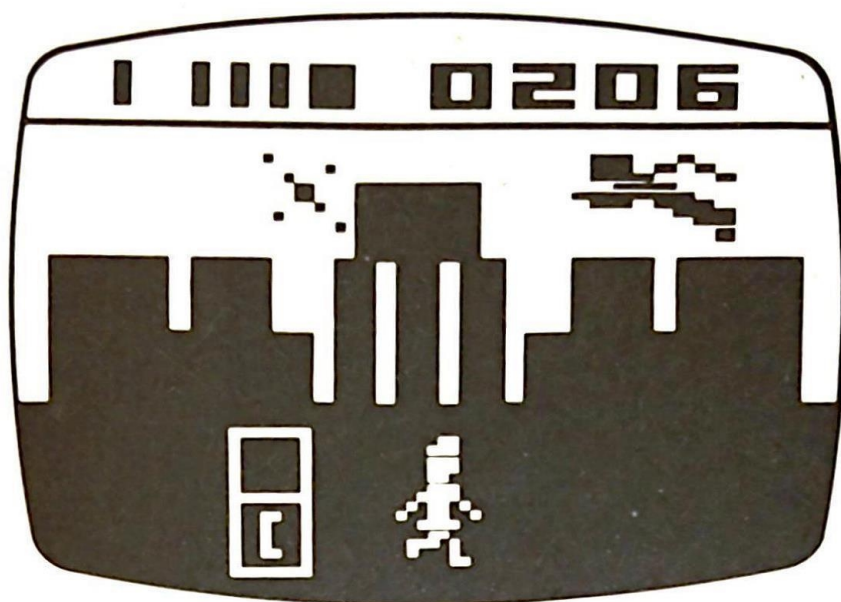
PRICE: About \$20

RATING: * ½

RECOMMENDATION: A very basic set of flashcards, hardly an electronic wonder.

Atari®

SUPERMAN™



Use your joystick controllers to actually manipulate the man of steel!! The game itself is simple in object, and more than a bit confusing to play. The object of the game is to collect a group of bad guys (Lex Luthor among them), lock them behind bars, rebuild the fallen Metropolis Bridge, change back into your Clark Kent getup, and return to the *Daily Planet* in the best possible time. You need the phone booth to change from Superman to Mr. Kent, and so you must control your motions as you fly from block to block in Metropolis. Each block, as you will see, contains an element that may be useful in play.

The game is far more complicated and convoluted than that which I have described here. Suffice it to say that the Superman game was released shortly after the movie was released, and that this is not one of Atari's more persevering games.

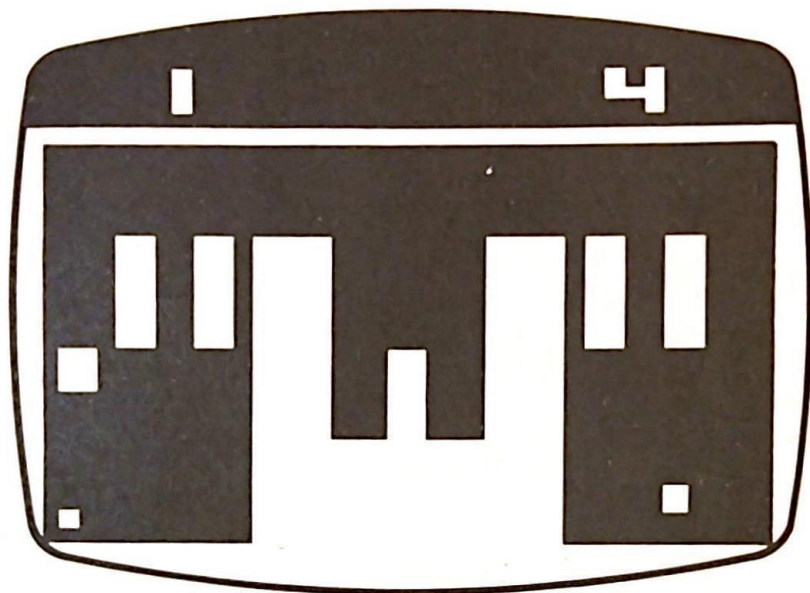
PRICE: About \$25

RATING: *

RECOMMENDATION: Stick to the comic books.

Atari®

MINIATURE GOLF™



Easily the most abstract putting course ever created, this strangely angular green, with its moving obstacles, square golf balls, and square holes makes a most entertaining game of golf. The joystick is used to control the head of your club—both the direction and the power of the swing. By setting proper angles, you must hit the ball toward the hole in as few shots as possible. (This is a 9-hole course, each "hole" sets up different obstacles and displays a different "par.")

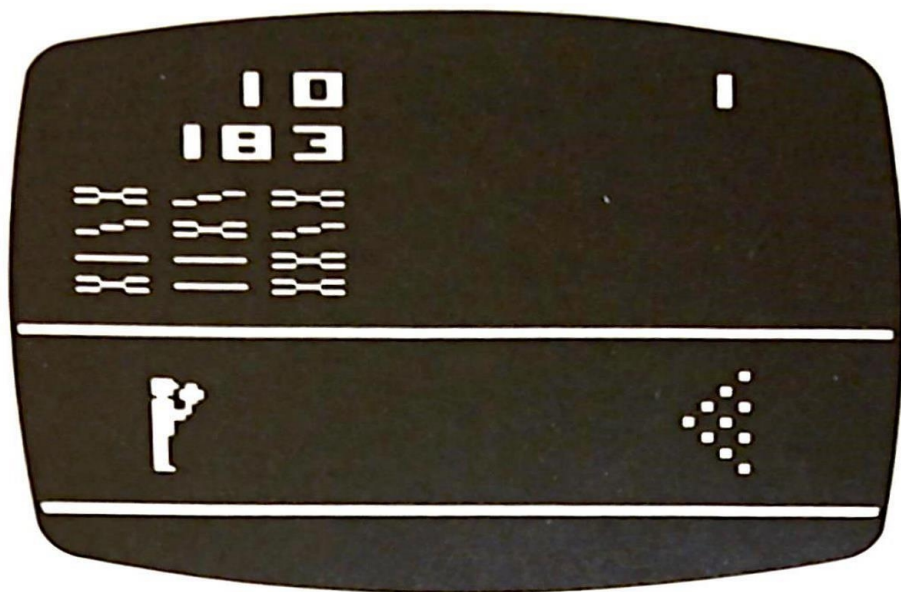
For one or two players, with a handicap (more power to your swing) for those who so desire.

PRICE: About \$20

RATING: *** 1/2

RECOMMENDATION: Played with pool-like precision, this is a fun game. It's a bit slow for a video game, just as golf is relatively slow as sports go, but more fun to play than many video games.

Atari®

BOWLING™

For one or two bowlers, each armed with joystick, this computerized alley provides a fair to good adaptation of the indoor sport. On screen is a full alley, with bowler on the left, and tenpins on the right. The joystick can be used, depending on game variation, to move the bowler's foul line position, ball curve, and literally steer the ball's motion.

All scoring frames are shown directly above the alley in somewhat compressed characters. All frames are shown at all times.

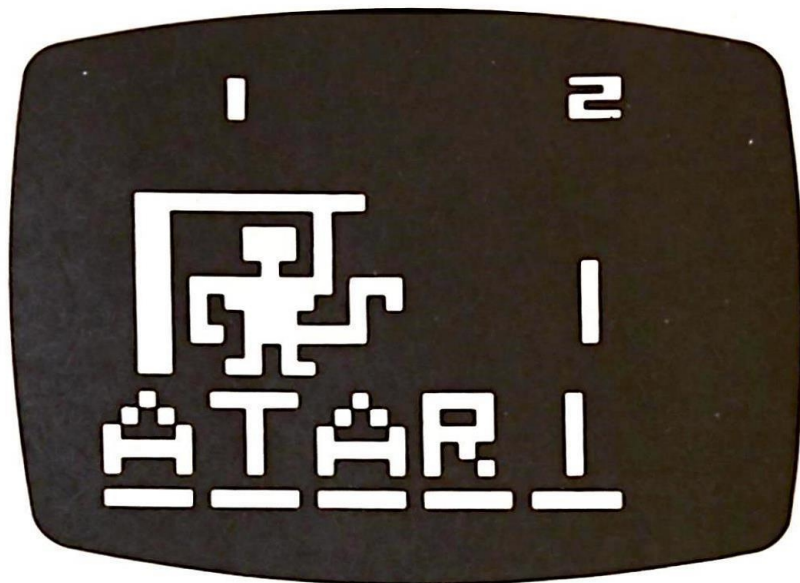
PRICE: About \$20

RATING: * * *

RECOMMENDATION: Not much real feel of the sport here, just a man releasing a ball. The action is a little awkward and the skill factor is marginal, but despite all flaws, it's fun to play, over and over again.

Atari®

HANGMAN™



This is the word game, played with very large letters. Use your joystick to quickly cycle through the whole alphabet—from A to Z or Z to A. Press the red button to enter your chosen letter. Eleven incorrect letter selections are allowed until the "hanging."

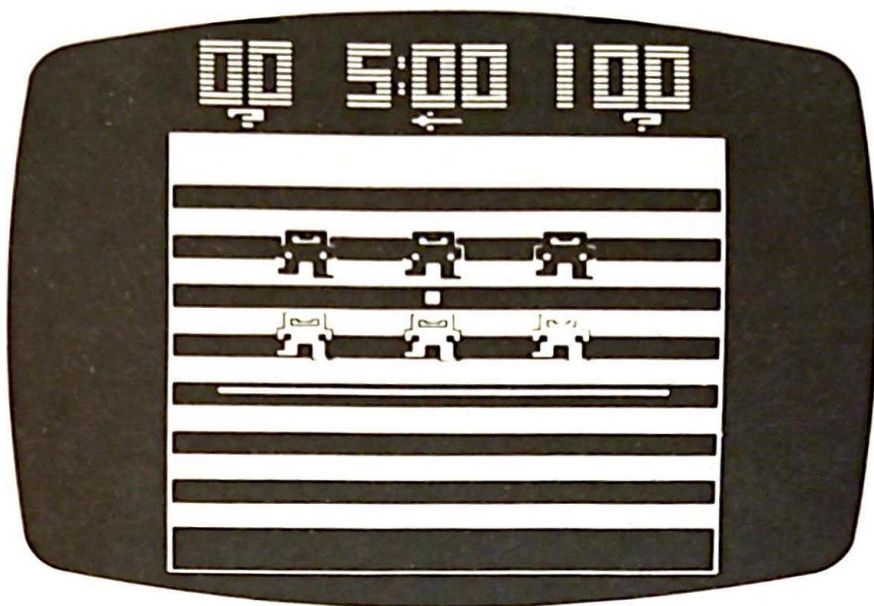
There are nine games, the first four of which are for solo play with the second four for two players. All of these are based on elementary-high school vocabulary lists or a per game basis. The ninth game is for two players as well, with one player entering a word of 1–6 letters for his or her opponent.

Each correctly guessed word is worth one point, and five points wins the game.

PRICE: About \$20**RATING:** ***RECOMMENDATION:** For children only.

Atari®

FOOTBALL™



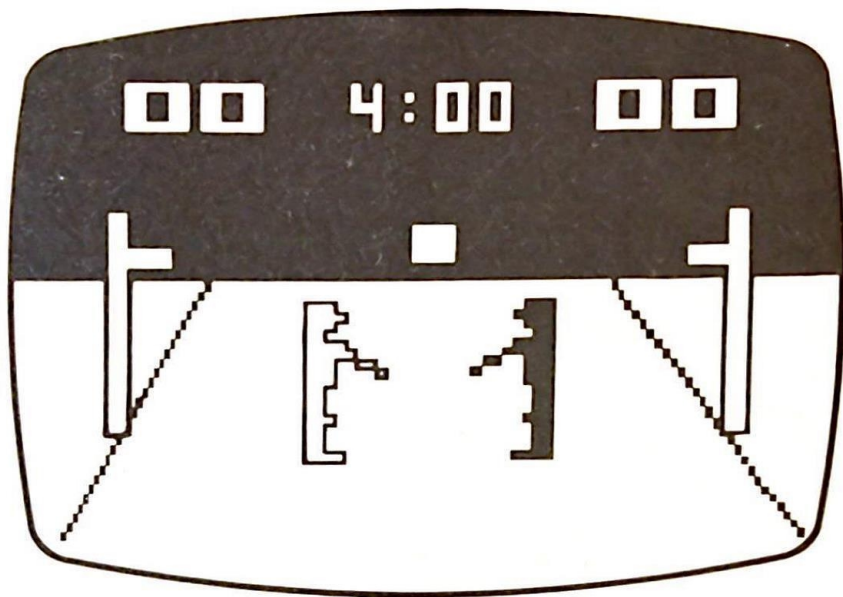
Compared with the FOOTBALL that appears on Mattel's INTELLIVISION, this game is hardly worth describing. Each team has 3 players which move toward goals on a nondescript striped gridiron (the matter of yardage never enters into this game). Both defense and offense preprogram their plays (a choice of five for each team, described in detail on the back pages of the instruction booklet).

Once the plays have been entered, the action begins. You may use your joysticks to change the path of certain players on your team during the play, or you may sit back and watch the computer execute your plays. Either way, this game of football is surprisingly flat, especially for a company like Atari, whose coin-operated arcade football game is a very big hit.

PRICE: About \$20

RATING: *

RECOMMENDATION: Stick to the other cartridges.

*Atari®***BASKETBALL™**

One-on-one basketball, Atari-style, is played with two stick figures who dribble as they run, and who shoot when a red button is pressed on your joystick controller. You merely try to work your way as near as possible to the basket, and then shoot when playing offense. Or try to stand between offense and basket if you're defense.

All play occurs on a flattened 3-D court, but the players move in a 2-D space, which is most confusing and even inadequate for serious play.

Two difficulty levels and one- or two-player action.

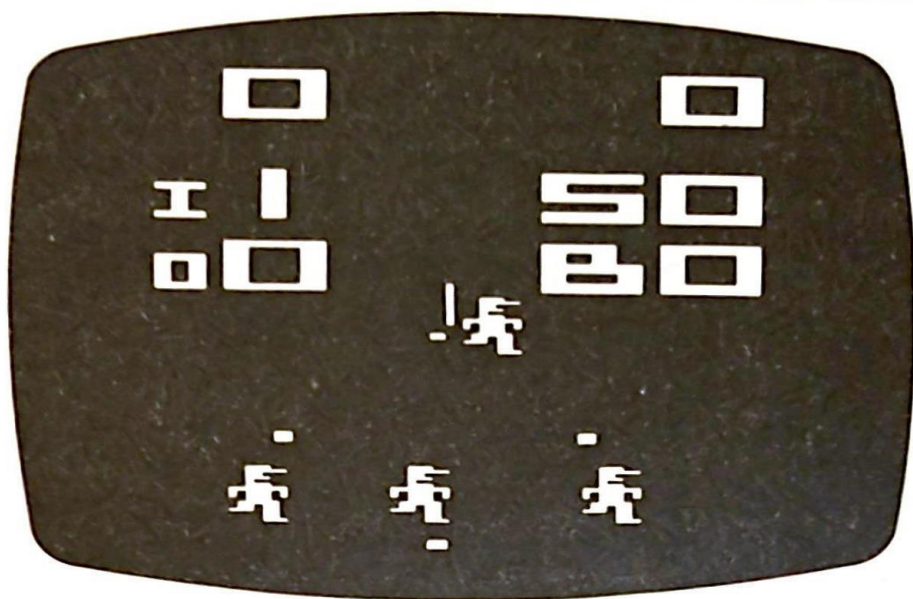
PRICE: About \$20

RATING: ***

RECOMMENDATION: Try the basketball that Atari makes for its 400/800 computers—more sophisticated, and more realistic.

Atari®

HOME RUN™



There are precisely three elements in the play of Atari's VCS baseball game. The pitcher can throw any of 4 different pitches, and control each of them while in the air. The batter has only one swing, accomplished by shoving the joystick in *any* direction at all. Running is computer-controlled, though a runner may be stopped at a base (to avoid a possible put-out) by pressing the red button on the controller. The pitcher becomes the outfielder after the ball is hit, controlling a trio of outfielders (who stand in a line, even in the most advanced of the games) to pick up the ball and thereby field it.

The ragtag manner in which this game plays, especially when compared with the Mattel INTELLIVISION game, makes for a relatively inadequate game.

PRICE: About \$20

RATING: * 1/2

RECOMMENDATION: Again, not especially effective.

*Mattel Electronics®***INTELLIVISION™—THE MASTER COMPONENT**

© 1980, Mattel, Inc., Hawthorne, California

Shortly after their successful foray into the world of hand-held electronics, Mattel started work on a highly versatile home computer system known as INTELLIVISION (short for Intelligent Television). The actual computer system comes in two parts, both of which will be described in these pages. The heart of INTELLIVISION is a special-purpose computer known as a "Master Component," whose sole function is to play games. This component fits directly into the top of a second "Keyboard" component, which looks and acts very much like a full-scale personal computer system. (A separate entry details the possible uses of the "Keyboard Component.")

Efficiently designed for tabletop use, the Master Component is a brilliant, yet simple, computer that a child can operate in minutes. Two hand-held controllers are attached directly to the component, and it is these units that are used to play every single game on INTELLIVISION. Each hand-held unit contains a 12-key pressure-sensitive pad, which includes digits 0-9, and an *enter* and *clear* key. At the bottom of each hand-held device is a "control disc" which combines the functions of Atari's paddle and joystick controllers. The control disc requires a little bit of practice to truly master, while the keypad is easier than a touch-tone phone. Incidentally, there are 2 more switches on the control unit, located on the side of the unit itself (there are actually 2 sets of these switches, so that either right- or left-handed players may operate at maximum efficiency).

There is a small port, designed for cartridge entry, located on the right-hand side of the "Master Component." All games are played using these cartridges.

Only two other buttons appear on the console: a *reset*, and an *on/off*. Most of the game control is where it should be—in your hands.

Mattel takes this concept a step further than any of its competitors by adding an overlay to the keyboard for each and every game. In the baseball game, for example, a plastic sheet imprinted with an exact replica of the on-screen diamond asks you only to press the base or the player involved rather than memorizing a list of digits associated with each fielder on the team. In each game, the overlay creates a totally new meaning for the keyboard—and you never use the keyboard "naked"—each and every game offers a keyboard overlay, just to help you along.

The retail distribution of INTELLIVISION has been very good, primarily because Mattel has such a strong history in toy and game retailing. Chances are good that cartridges will be available in a neighborhood shopping mall, and equally good that you'll see new cartridges every few months. Mattel promises to introduce well over a dozen new game cartridges every year, hoping to surpass the Atari library in a relatively short time.

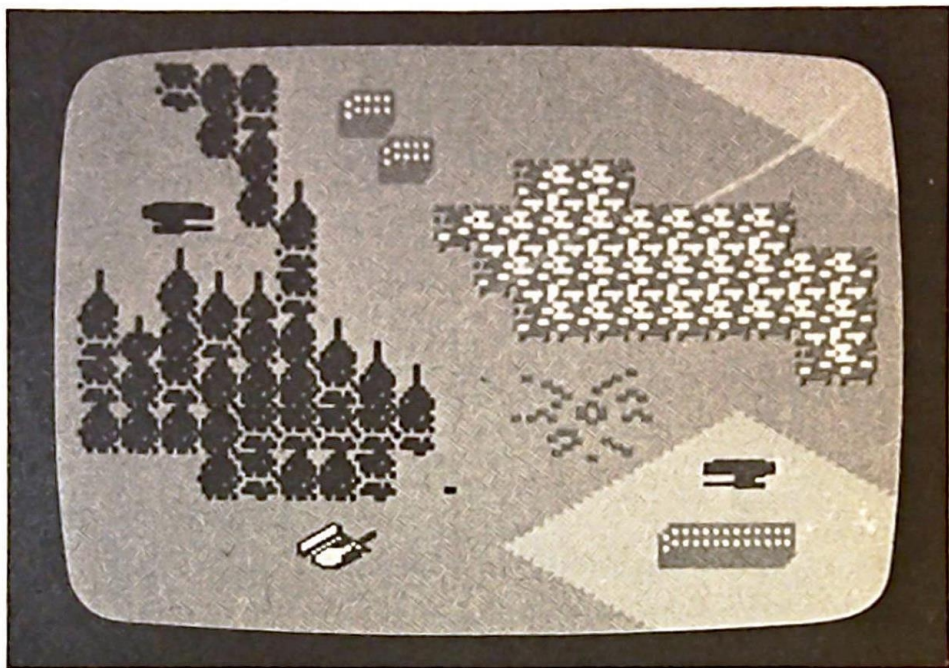
MANUFACTURER: Mattel, Hawthorne, California

PRICE: \$250–\$300

POWER REQUIREMENTS: AC adapter included with unit

RATING: * * * *

RECOMMENDATION: The price of this unit is considerably higher than the other top-selling unit, Atari's VIDEO COMPUTER SYSTEM. The games on Mattel's component are considerably more complicated than those on Atari's system. Additionally, you may look at the "Master Component" as a first step to the overall computer system, which is precisely the way that Mattel hopes you will look at all of this. The system, of course, is of secondary importance; most significant in your purchase of any computer system is the software, better known as "The Games."

*Mattel Electronics®***INTELLIVISION™ ARMOR BATTLE™**

A tank game par excellence, **ARMOR BATTLE** is a tactical war game designed for two players. Each player begins the game with 2 tanks, so there are 4 tanks on the screen to start. These tanks are invariably buried in the forest, or behind buildings, or in the water. Your tank must first be eased out of the obstacle before it can be used as an offensive weapon. And when Mattel says that these fellows move like tanks, they're not kidding. The vehicles move more slowly and more clumsily than any conveyance yet invented for the video screen. Changing course, accomplished by using the control disc as a compass of sorts, is a slow, tedious process. But all of the clumsiness is part of the fun, because both players are laden with these turtlelike battle pieces.

The game is played with one tank at a time, and you may change the active tank by touching a button on your keypad. The object of the game is to successfully bomb each of your opponent's tanks three times (each time you blow a tank to kingdom come, a small puff of smoke marks the site). As you might expect, shooting over the long courses, or through the woods, is not as accurate as shooting from only inches away from the tank. Just as speed games like football force all players to think and act at extremely fast speeds,

ARMOR BATTLE forces players to conquer very *slow* speeds. There's no such thing as sneaking up from behind here—every move is out in the open, and most of the moves are so laborious that they are apparent to all concerned. The game then becomes a question of how well you shoot, and how fortunate or unfortunate the recoils from your own shots make your positions.

You can lay invisible mines, unbeknownst to your opponent, which explode within 5 seconds of their placement. This is a rarely used tool, but one that may prove important in particularly close matches. Only one mine is needed to knock out a tank.

A list of strategies, mostly involving a force play where your opponent has no alternative but to get caught in an obstacle, is included in the instructions. It is most helpful.

There are 240 different maps in the cartridge memory, so each mission will be a unique experience. All maps include a green grassy area, a water obstacle, a forest, buildings and a road (the road is the fastest way to travel, but sometimes they're hard to get to). You may set as many maps as you care to before play begins.

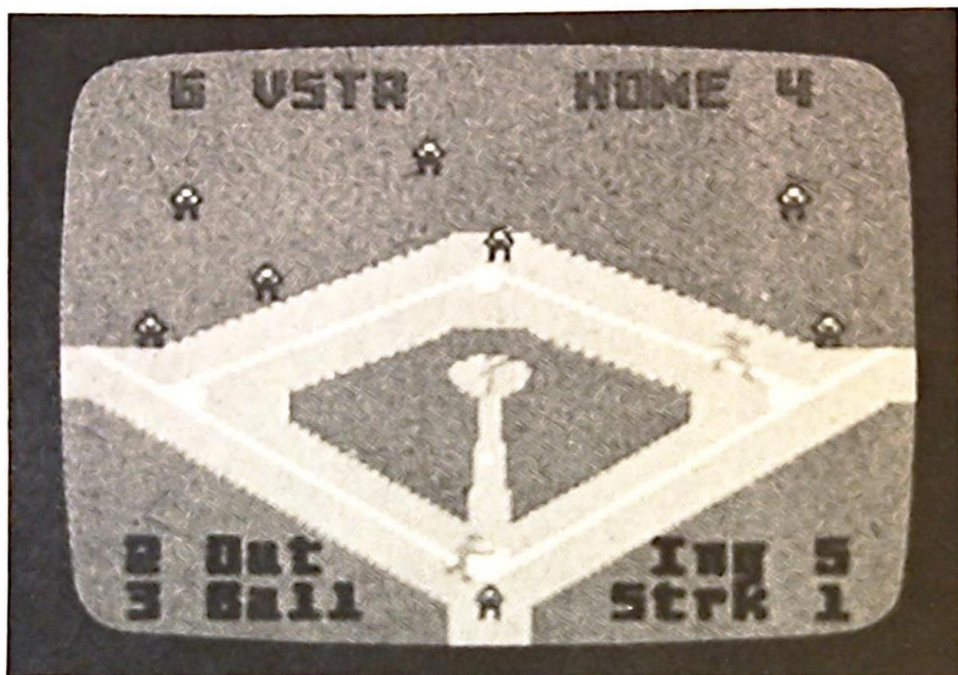
PRICE: \$25–\$30

RATING: ★ ★ ★ ★

RECOMMENDATION: Remember that this is a two-player game and that it cannot be played against the computer. You'll have lots of fun with this one—a fine blend of strategy and action.

Mattel Electronics®

INTELLIVISION™ MAJOR LEAGUE BASEBALL™



© 1980, Mattel, Inc., Hawthorne, California

There is no electronic adaptation of baseball available that surpasses the authenticity of Mattel's MAJOR LEAGUE BASEBALL. In fact, there are few electronic versions of *any* sport that play so very well on video. The game is simply terrific.

A plastic overlay of the whole ballfield fits directly over your hand-held keypad. Nine ball players, each ready and in position, are drawn directly above nine of the buttons. Press any player and the ball will be thrown to the position you've activated. A few tosses "around the bases" will demonstrate just how realistic the action feels. (When you actually play this game, you'll probably be fascinated by your ability to *throw* the ball. I know that I was.) After a practice run, return the ball to the pitcher by pressing his position. It is time to start the game.

The pitcher chooses his strategy by pressing one of eight regions on the direction disc. This too is most logical—the faster pitches are toward the top, and the slower ones are the bottommost part of the disc. Curves are aligned to a right-handed batter—left is "inside," and the right is "outside." The person who pitches uses his/her controller to initiate the action. The batter merely presses either *bat* or *bunt* on the opposing controller.

The offense must watch the pitcher very carefully, select, consider timing, and press *bat* (or *bunt*) at the precise instant when the ball crosses the strike zone. As you perfect your timing, you'll be able to place the ball in right, left, or centerfield.

Once you hit the ball, press the disc to start running. And remember that your runner is racing against the fielding team, who run after the ball and throw to the proper base (all via control of a *human* opponent). You can even get caught in a rundown between two bases (hence the ability to run backwards). Stolen bases, and double plays are part of the game as well. (Only two standard baseball rules have been eliminated in order to clarify the play—there are no fly outs, and no bases gained when a batter is hit by a pitch.)

With three play speeds, for two players.

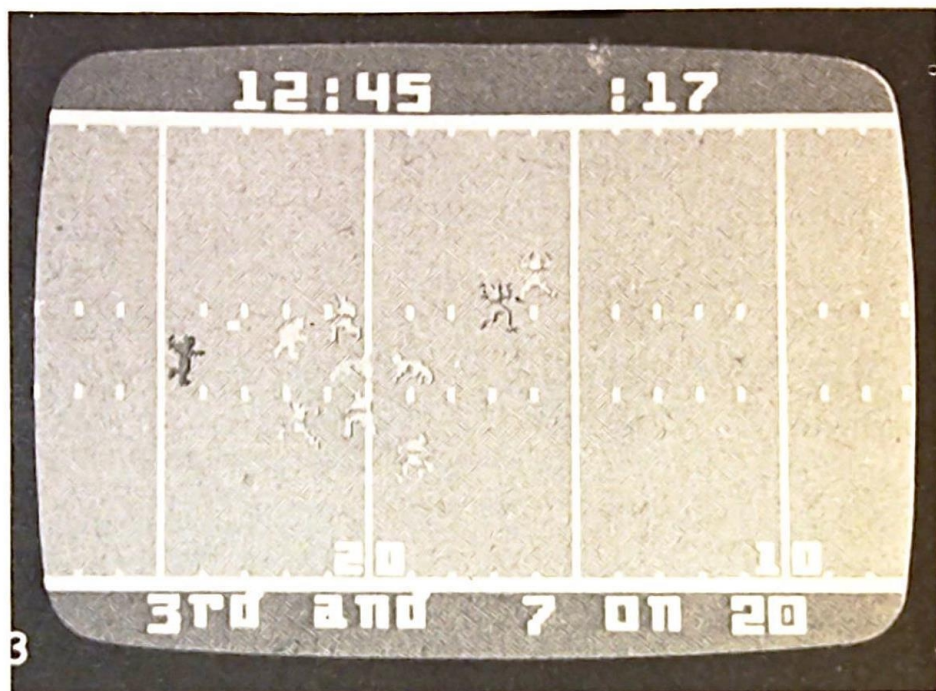
PRICE: \$25–\$30

RATING: ★★★★★

RECOMMENDATION: Play it once and you'll want it for your very own.

Mattel Electronics®

INTELLIVISION™ NFL FOOTBALL™



© 1980, Mattel, Inc., Hawthorne, California

So far as video versions of America's favorite sport are concerned, Mattel's got the winner hands down. The reason why is simple: attention to detail, serious player control, the ability to plan your offensive and defensive plays and revise your plans instantly. All of this, combined with a high-clarity playing field (which scrolls across the screen, showing 20 yards at a time), and realistic play results make INTELLIVISION NFL FOOTBALL a solid adaptation.

The game begins, as all INTELLIVISION games do, with the insertion of a plastic overlay into the hand-held controllers. In this instance, the first 9 buttons are labelled 1-9, with the 7 key also used to identify running plays, the 8 key for kicks, and the 9 for pass options. Player movement is the result of moving the floating disc: if you press the top of the disc, the player you control will run toward the top of the screen, and if you press the bottom, the player will run toward the bottom, and in a similar fashion for side-to-side motion. You'll find that each team controls one of five players, with the computer taking charge of the remaining four men on each side.

The actual play starts with a choice of speed—either "NFL Speed," which

is very fast, "Semi-Pro," which is fast, "College," which is medium speed, or "High School," which is slow. Once you select the speed, you'll hear a cheer, a fanfare, and assorted jubilant sounds, and you'll see the teams run out onto the field. Both teams huddle, and the formations are selected. It is here that NFL FOOTBALL becomes a game of strategy. A playbook details the player formations available, and any of these can be reproduced on screen by typing in a whole series of digits. (The ritual is long and tedious if you're unsure of what you're doing—just be sure to follow the directions precisely, and you shouldn't have much trouble). Three digits are required for a run play, 5 are needed for a pass play, and 2 are needed to program defense for any play. The passing plays are most complicated, with two eligible receivers, the timing of the hike (initiated by one of the side buttons on the controller) and the movement of the receiver. The action is realistic, as the quarterback fades and takes on a mind of his own as he passes to the eligible receiver. And, of course, your control switches from the QB to the receiver at the proper moment.

Running and kicking plays are somewhat less complicated, but equally intriguing. You'll find that the blend of strategies in this football game is very, very similar to those involved in the pro sport. (There aren't many sports adaptations that can make that claim). Manual control of one player on each team makes the game even more realistic.

Scoring is clear and easily understood. The game is played over 4 quarters of fifteen simulated minutes each. You'll find that the scoreboard will respond to the action of the game, stopping when a player runs out of bounds, when a pass is incomplete, after touchdowns, and so forth.

A most enjoyable sporting event, requiring two players for every game (the computer cannot play against a single human).

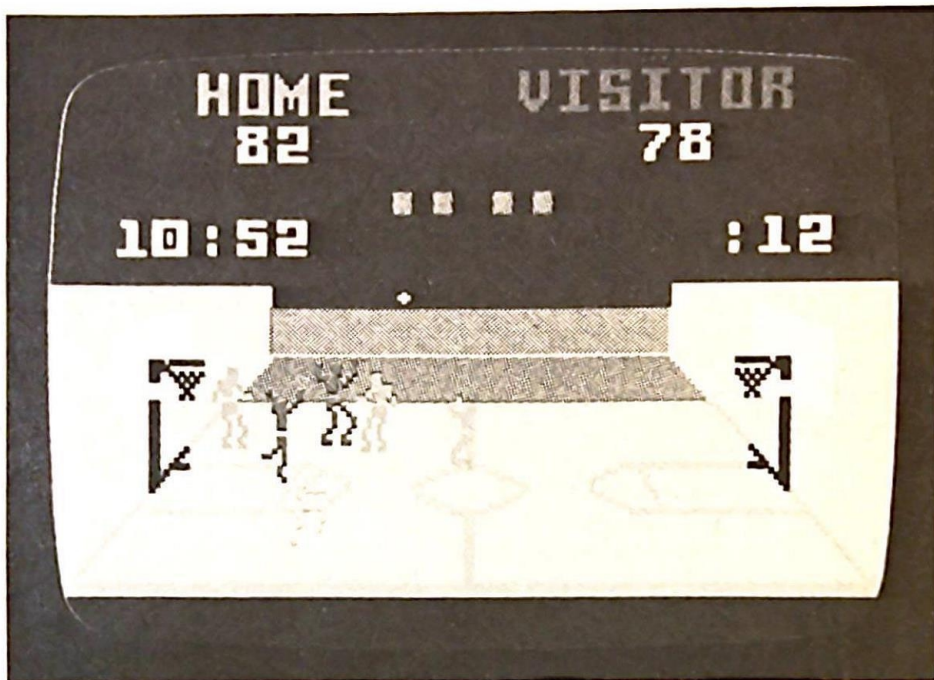
PRICE: \$25–\$30

RATING: ★ ★ ★ ★ ★

RECOMMENDATION: You'll need some time to become comfortable with the numerical entries, but that's the only difficulty here.

Mattel Electronics®

INTELLIVISION™ NBA BASKETBALL™



© 1980, Mattel, Inc., Hawthorne, California

NBA BASKETBALL is one of the more confusing games on INTELLIVISION, primarily because the plastic overlay card (for the hand-held controller) contains so much information about the offensive game. As with FOOTBALL, there are four playing speeds. I suggest that you start with the slowest of these speeds, because you'll need all the help you can get in learning how to play this game.

The overlay contains nine pass keys, each of which represents a ninth of the offensive half-court (think of the court as a tic-tac-toe board, and look at the nine buttons in the same way, and you'll be able to follow the pattern). Press the area of the court that you want the ball to go to, and one of the computer-controlled players will race over to the area, hopefully in time to receive the ball. (The ball will, however, be intercepted if the opposition gets there first).

Players are moved via the floating disc, in precisely the manner designed for the FOOTBALL game.

Aside from dribbling and running to passed balls, the game of BASKETBALL obviously involves shooting as well. One button in the keypad is a *jump shot*, and another is a *set shot*. In the first case, the shooter leaves the

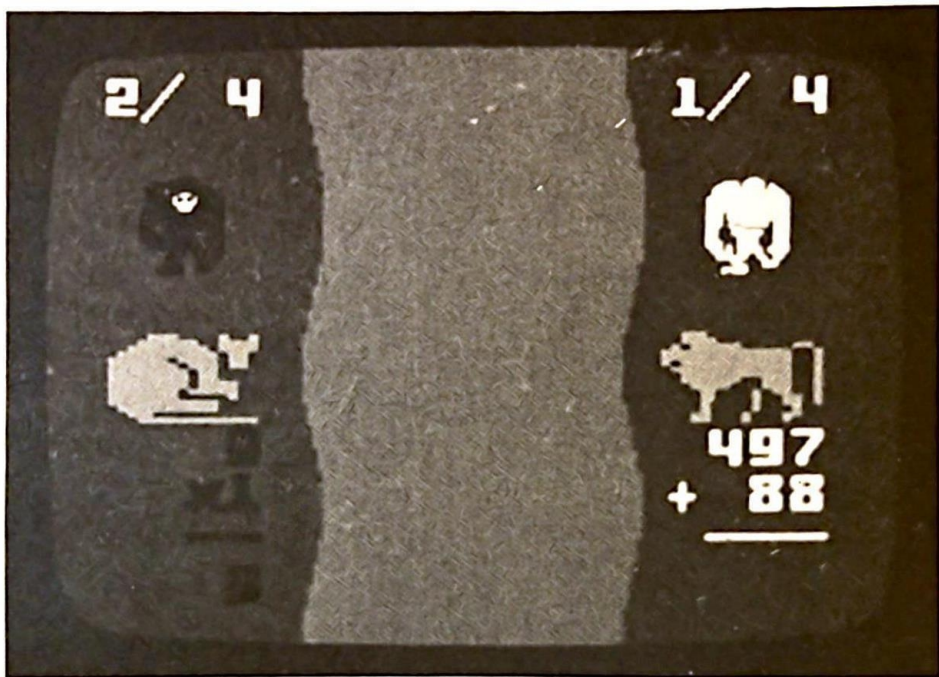
ground, and so he's a little harder to block than in the second case, where the shooter is stationary, and more likely to score a basket. Your shooter is always manually controlled, one of three players on the offensive team, the other two are run by the computer. The defense also has three players, one of whom is human-controlled. The controllable defenseman is used to block, rebound, intercept passes and steal the ball; all functions can also be done, with a little less accuracy, by his computerized counterparts.

The best games on this court are played with lots of running, and lots of passing, with a healthy amount of fast strategy. The size of the hand-held controller makes this collection of feats difficult indeed, made even more so by the fact that small, abstract players sometimes obscure one another during crucial moments of the game.

PRICE: \$25-\$30

RATING: • • • •

RECOMMENDATION: Try this one in the store before you buy. It isn't as perfect as some of the other INTELLIVISION cartridges, particularly for novices.

*Mattel Electronics®***INTELLIVISION™ ELECTRIC COMPANY™
MATH FUN**

© 1980, Mattel, Inc., Hawthorne, California

Children's math games have never been more entertaining than with the INTELLIVISION cartridge designed by the folks at The Electric Company. Each player is a gorilla, racing through the jungle. As he runs, he encounters all sorts of animals. Each animal brings a mathematical problem (preset at one of fourteen levels). A correct answer will result in your gorilla prancing once again along his jungle path, until he meets up with another animal and another problem. A wrong answer will force your gorilla into the river, where hippos and crocodiles provide progressively easier problems. A gorilla can only leave the river if he answers a question correctly.

You may preselect the number of problems you wish to conquer in each match, and that number can vary with each of the two gorillas who play the game.

Total scores are based on the number of problems correct (100 points for each correct answer) and the number of seconds required (children are encouraged to convert minutes to seconds in this sneaky bit of educational fun).

Gorillas, incidentally, do a victory dance when they've completed the series of problems. Buy one for your gorilla today.

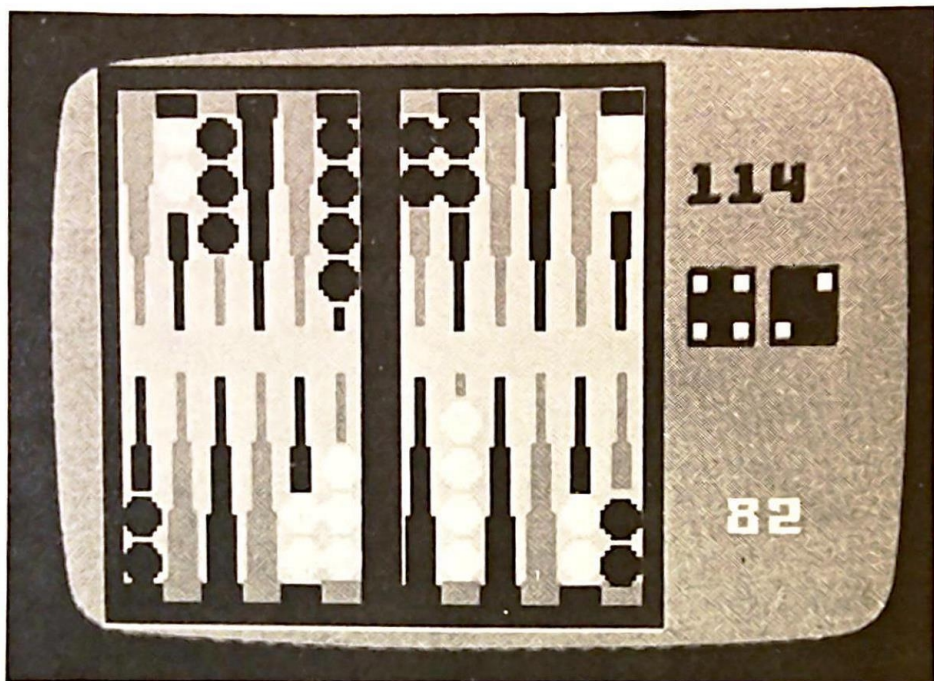
PRICE: \$25-\$30

RATING: * * * *

RECOMMENDATION: A children's game for sure, but adults will find that the most challenging problems will be toughies even for them without the help of a scratch pad. Younger children should be encouraged to use a pad and pencil as well.

Mattel Electronics®



INTELLIVISION™ APBA BACKGAMMON™



© 1980, Mattel, Inc., Hawthorne, California

The American Backgammon Players Association has lent its good name to Mattel's fine version of the strategy classic, and with good reason. Extraordinarily clear and well devised, the game can be played as either a conservative, straightforward bout, or as an aggressive, highly developed war of nerves. Only doubling is missing.

You'll find that the gameboard is particularly clear, and that the action of the cursor (a small indicator used to mark the checker currently in play) is quick and painless. The fact that you are playing backgammon on a TV screen—frequently a tedious venture in other formats—becomes a plus with this INTELLIVISION game.

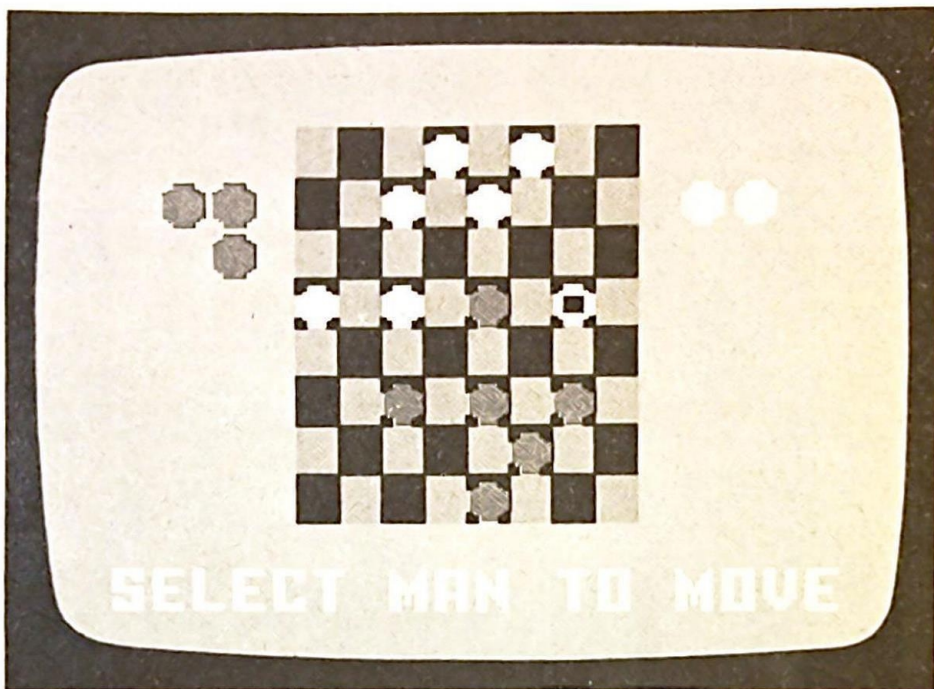
The plastic overlay, which is placed on top of the control keyboard prior to play, is crisply efficient. Moves are accomplished by pressing die faces ( through ) rather than digits. A *move two* switch is most convenient when doubles are rolled. The cursor is moved via floating control disc. All in all, a delightful way to play backgammon. And a superb way to learn the game, especially in light of the buzzer which identifies illegal moves.

The instruction book details the rules of APBA backgammon as well as the particular scheme of the Intellivision version.

PRICE: \$25–\$30

RATING: ★★★★★½

RECOMMENDATION: Computer backgammon experts may object to this game's comparatively straightforward rendition, but all others are likely to be fond of this version.

*Mattel Electronics®***INTELLIVISION™ CHECKERS**

© 1980, Mattel, Inc., Hawthorne, California

INTELLIVISION truly adds new possibilities to a game that's nearly forgotten amongst the younger players. An extremely popular game in my grandfather's day (he taught me, and judging from the way I play today, he never used very strong battle plans against me). The computer is a tough opponent—it sees nearly every move and every possibility, and so it is difficult to win even in the best of circumstances. There are two skill levels, but almost no one was able to play a serious game on the second skill level as the computer took sheer advantage of its clearly superior mental capabilities. A kind soul it is, however, because the very same wizardry that wins the games for the computer is available to the human player—a special "Computer Suggests Move" button can be pressed before you make your own move. Use it if you see fit—it's usually a great help in planning and executing your every maneuver.

A touch of animation, where a captured checker will simply fly off the board and onto a offsides rack, makes this game a bit more appealing. Checkers has never been so much fun.

PRICE: \$25-\$30

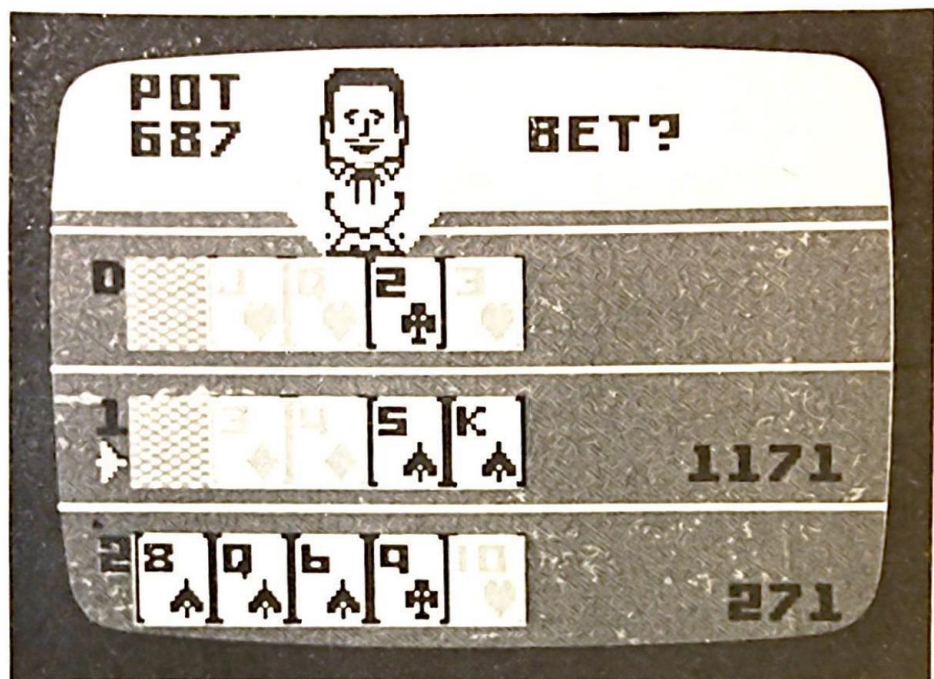
RATING: * * * *

RECOMMENDATION: Better than a checkerboard because you can play with the computer. You can also play against a friend. *FOR COLOR TV VIEWING ONLY.*

Mattel Electronics®

INTELLIVISION™

LAS VEGAS POKER & BLACKJACK



© 1980, Mattel, Inc., Hawthorne, California

Las Vegas-style gambling isn't a complete experience without a cold-hearted dealer, and it is Mattel's beady-eyed dealer who controls this electronic card table. The dealer communicates in short phrases, seen in print within the bounds of a comic-book balloon. His first question in all games is "Wallet?", which invites you to set your own betting limit ("How much you wish to lose"). You respond by looking down at your keypad, with plastic overlay already inserted, and typing in a number between 1 and 9999. Now select a game on his "Ready?" command—choose either FIVE-CARD STUD, SEVEN-CARD STUD, FIVE-CARD DRAW (all three are poker games, for those who are uninitiated), BLACKJACK, DEALER'S CHOICE (any of the games may come up), or SAME GAME.

Let's start with BLACKJACK. Bets are laid, cards are dealt in fairly ordinary fashion (the dealer is a little on the flashy side—racing his little eyes back and forth as he tosses your cards into position). The play of the game is simple, allowing only commands for *hit*, *stand*, and *double down*. There is no insurance against possible dealer blackjacks on this table. Dealer stands at 17.

FIVE-CARD STUD features an active dealer, who can *bet*, *raise* and *call* just like the other one or two players in the game. He also bluffs, and that electronic poker face tells nothing at all. Bets are laid (and hands can be dropped) after each card is dealt from card #2 to card #5. The first card is dealt face down—if you care to see your card (and allow your opponent to see your card as well), press any position on the disc below the keyboard. You never see the dealer card until the end of the game, when the dealer himself announces the winner of the pot. This is of course a gambling game, made more fun by a rancorous dealer.

You may transfer your wallet from one game to another in this casino. Let's try a game of SEVEN-CARD STUD. House rules are identical to the FIVE-CARD version, but the first, second, and seventh cards are left unexposed. The first round of bets occurs after the third card is dealt. The game is won, of course, by the player with the best five cards out of seven.

Transfer over to FIVE-CARD DRAW by pressing the appropriate button on your control console. The game's the same as STUD, with one important difference—after the first bet, you can discard zero, one, two, or three cards by identifying their positions in your hand and pressing the *enter* button. (Incidentally, if you make an error in this or any other game, there is a *clear* button, but you must use it *before* you press *enter*).

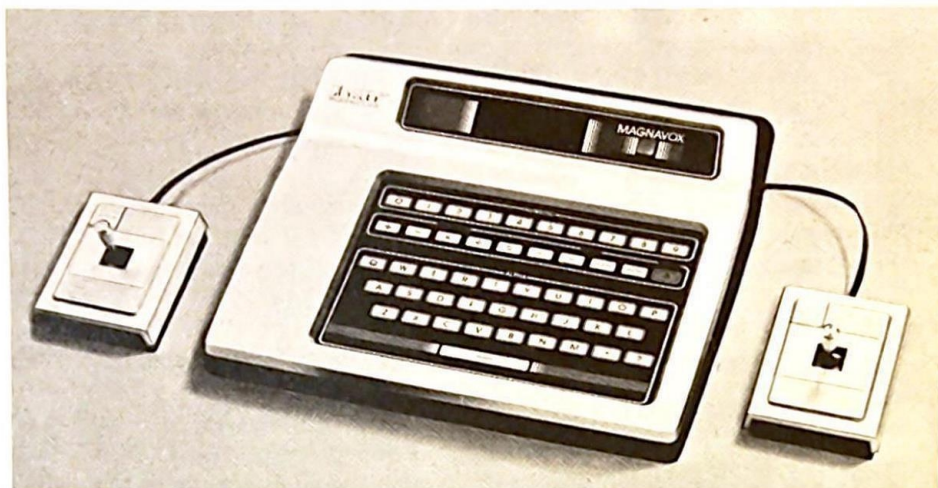
Theoretically, you can play this game until you've gone broke (in which case you can simply reset the game and start again). It's fun for a good few hours, especially if you're on a winning streak. But good as it is, the real thing is far more exciting.

PRICE: \$25–\$30

RATING: * * * ½

RECOMMENDATION: Great with parties or friends—everyone loves the dealer. But when all is said and done, this snappy little system does nothing more than count up your money totals and deal cards, and you don't need a computer to do that.

*Magnavox***ODYSSEY²™**



In 1978, when Magnavox introduced "The Ultimate Computer Game System," ODYSSEY² was a remarkable machine. Here was the first effective combination of home computer and game system, complete with typewriter-style keyboard and well over a dozen different game cartridges, each offering new possibilities in electronic game play. ODYSSEY² was a most impressive achievement, made by the company who had originated the very idea of cartridge video game systems with the original ODYSSEY back in 1972.

This latest version plays several superb games, but the overall graphic appearance of the games are broad, bold, and rarely detailed. This makes each game appear to be more simplistic and not nearly as well-tooled as the INTELLIVISION or Atari equivalents. Most of the sports simulations suffer from oversimplification, with the possible exception of the COMPUTER GOLF cartridge (9 holes, each one offering a new challenge) and the only video version of POCKET BILLIARDS.

The war games, frequently entwined with science-fiction plot lines, are the best offerings on ODYSSEY². INVADERS FROM HYPERSPACE, OUT OF THIS WORLD, and WAR OF NERVES, each a target game between robotic adversaries, are the best in the category. There's a wonderful action pinball game, with all sorts of thumper bumpers, bonus situations, and very quick ball action called THUNDERBALL! and even a PACHINKO (Japanese pinball) as well.

The brain games and educational cartridges include MATCHMAKER/LOGIX/BUZZWORD (variations on HANGMAN, CONCENTRATION, and MASTERMIND), MATH-A-MAGIC/ECHO (an arithmetic drill, and a sur-

prisingly effective SIMON game), and DYNASTY (a computer version of OTHELLO, which can be played against the computer). I'VE GOT YOUR NUMBER turns math drills into a lighthearted battle, and it's one of the better games here as well.

A COMPUTER INTRO cartridge allows users to dip into the world of basic programming, but the limitations of this system's hardware do not allow any expansion beyond the initial lessons on the cartridge itself.

The Magnavox unit is roughly the size of an electric typewriter. The keyboard is a single pressure-sensitive plastic sheet. Two hand-held controllers, roughly comparable to Atari's joysticks, are permanently attached to the back of the unit.

MANUFACTURER: Magnavox, Fort Wayne, Indiana

PRICE: Under \$180 (cartridges cost about \$20 each)

POWER REQUIREMENTS: AC operation only

RATING: * * *

RECOMMENDATION: Magnavox has not been as aggressive as other companies in the introduction of new cartridges, hence their catalog includes roughly two dozen different cartridges and no more. The games are generally quite good, but the system's inability to expand, combined with this limited library, make it appear pale against some of the more ambitious products on the market.

APF

APF's M1000



APF Electronics is a New York-based company that is gaining considerable ground as a maker of reasonably priced computers for the home. Their IMAGINATION MACHINE, of which this video game system is a part, is a

multi-purpose computer and the ability to expand into a line of peripherals which includes floppy disk drives, printers, a telephone modem, an interface module, and additional memory.

The M1000 is similar in format to Mattel's INTELLIVISION "Master Component," as it is the game-playing heart of the computer system. The M1000, like the master component, can be bought separately, and operated only as a video game terminal. A game of ROCKET PATROL, one of those target games in outer space, is written into the circuitry of the M1000. All other games are entered via individual cartridges.

CATENA, known to the world as OTHELLO, is the best game available. Playable in any of three modes (player versus player, player versus computer, computer versus computer), this computerized version of the table game is a strategist's delight. The gambling cartridge is also quite good, offering the only game of computer KENO available in cartridge form (several personal computer systems have cassette versions of the game, but it's nice to see it in a video game system). An adequate ROULETTE and an ordinary SLOT MACHINE finish out the cartridge.

One rather simple game, tossed in as an extra on the UFO/SEA MONSTERS target cartridge, was a consistent favorite in testing sequences. Called BREAK IT DOWN, this is a simple target game where a small missile is dropped into a square ring. Each time the missile touches the ring, it eliminates a section of the ring. The idea of the game here is to eliminate the entire ring as it rotates in a counterclockwise direction. Like BREAKOUT (called BRICKDOWN on the M1000), BREAK IT DOWN is very, very simple, and fascinating for long periods of time.

A PINBALL/DUNGEON HUNT/BLOCKOUT cartridge is also quite good, with the pinball spirited and the BLOCKOUT very much like Atari's SURROUND. (DUNGEON HUNT is a weak guessing game).

By and large, the sports simulations on the M1000 are not very good. The BACKGAMMON is not as strong as other cartridge backgammons.

Among the best games on M1000 is HANGMAN. It is extremely clear and even features a small area of the screen which comments on your progress through the game. Unfortunately, the HANGMAN cartridge also includes a TIC-TAC-TOE (why would anyone spend \$20 to play TIC-TAC-TOE on a TV screen?), and a DOODLE device. Nothing special.

There are 11 cartridges currently available for use in the M1000. They are, you must remember, only part of the IMAGINATION MACHINE, a full-scale home computer system. There are nine "education cassettes" that fit into the IMAGINATION MACHINE, including PLAYER PIANO, TYPING TUTOR, MATH TUTOR, ARTIST AND EASEL, COMPUTER LAB (based on assembler language), and several educational game cartridges, specifically perception games, word games, spelling games, and an interactive BASIC learning cartridge. A personal and home management series which emphasizes the use of graphics in common accounting tasks completes the library. You can

expect APF to introduce a good many cartridges and cassettes in the next year or two, as they further establish their presence in the marketplace.

MANUFACTURER: APF, New York, New York

PRICE: About \$129.95

POWER REQUIREMENTS: AC only

RATING: * * * *

RECOMMENDATION: This is a strong system by any comparison, yet it costs less than the competition. The graphics are not as flashy here as they could be (sometimes they're a little difficult to read, even on the best TV sets). The software library is very good, however, good enough to forgive the lack of display clarity.

Before buying another "name" video game system, you really should take a look at the APF system for two good reasons. First, the game library is very good. And second, it can be expanded into a full-scale computer.

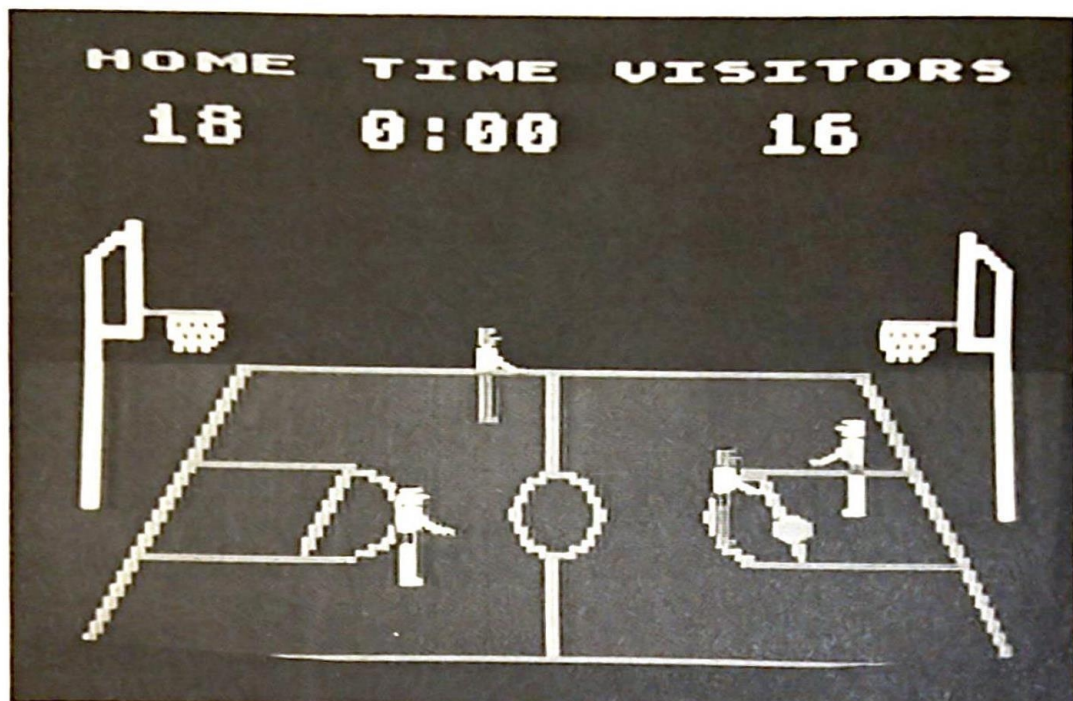
If you don't see the M1000 or IMAGINATION MACHINE in your local department store, try your local computer retailer ("Computerland," etc.). All APF equipment has become quite popular in that retail business.

PERSONAL COMPUTER GAMES

Personal computers, many of which appear in offices, family rooms, and libraries, serve a great many practical functions. They are most popular, however, when used to play games. All of the best-known personal computers require customized game programs—so that you cannot use a Radio Shack game on an Apple computer, for example.

Radio Shack, Apple, Pet, and Atari all manufacture programs for their own computers. The games that follow should give an idea of the detail allowed on a personal computer, in this case the Atari 400 or 800 computer, which retail about \$500 and \$1000 respectively. Consult your retailer for information on other Atari games, as well as games to be played on the other home computers.

Atari®

BASKETBALL

Considerably more versatile than Atari's VCS original, this full-court game of BASKETBALL is one of the best available. We see the court from the point of view of a fan, whose seat is located in the stands just above the center line. The game can be played as one-on-one (with either the computer or a second human as the opponent), two-on-one (with three human players), or two-on-two (with four human players or two human players against two computer players). All games are played with the joystick controller, which allows players to be moved toward the top of the screen, the bottom of the screen, either side, or to any corner. The control is a two-dimensional process, while the field is a three-dimensional view; you will need to adjust to the "dimension warp" before you really master the game.

Shooting is done by controlling the player's actions on the screen, and watching the movements so that you time the release perfectly. Again, this is tough at first, but a skill factor after you've practiced for a while. Blocking is done by telling your guard to jump at the right moment. Practice makes perfect here as well.

PRICE: \$39.95

RATING: * * * * ½

RECOMMENDATION: A great action game, lacking some of the finesse included in the Mattel INTELLIVISION version.

Atari®

SUPER BREAKOUT™

A vastly improved version of an already-wonderful game, SUPER BREAKOUT is designed for play by one to eight participants, using paddle controllers. There are four different BREAKOUT variations here, all of which are adaptations of the coin-operated masterpiece created by Atari.

The first game is the basic BREAKOUT game, where a ball is used to eliminate bricks from a wall in a PONG-like action (this is described more fully in the VCS BREAKOUT review, see page 252). The second game is called PROGRESSIVE BREAKOUT, because the wall, or more accurately, a series of walls, progressively draws nearer to your paddle throughout the game. DOUBLE BREAKOUT is played with two paddles and two balls, by one player, and is considered by many to be the most difficult BREAKOUT of all. CAVITY is like the first game, with two holes cut in the brick wall. Inside each hole is an additional ball, which may be played at the same time as your original ball-in-play. The balls are released once the bricks surrounding the cavity have created an opening in their chamber.

A scoring and rating chart, far too complicated to explain here, is included in the instructions. You may freeze action on the screen by pressing appropriate computer keys as well.

PRICE: \$39.95**RATING:** ★★★★★**RECOMMENDATION:** One of the best video games ever devised.

*Atari®***COMPUTER CHESS**

Comparing one computer chess game to another can be a risky and inaccurate venture at best, and so I shall concentrate on features instead of conjecture as to computer programming.

There are eight skill levels in this video chess, timed at 15, 30, 45, 150, 180 seconds, and 10 minutes, 9 hours, and 10 hours.

The game is always human versus computer, on a large, clearly drawn chessboard. Pieces are moved by an occasionally inaccurate joystick controller.

A "check" situation is shown most graphically, as the king's animated motion leaves little question as to circumstances.

Using the "S" on your computer keyboard, you may construct particular play situations for educational purposes.

Castling and en passant are standard features, as in pawn promotion.

PRICE: \$39.95

RATING: * * * *

RECOMMENDATION: A solid game of chess, but it would have been nice to see an on-screen clock to show time elapsed or time remaining in each move. Perhaps we'll see this in a subsequent release.

Atari®

STAR RAIDERS™

Atari calls their STAR RAIDERS cartridge a "computer adventure" instead of a "game," and with good reason. This is the first mass market software cartridge to truly demonstrate the massive capabilities of a personal computer. It is very nearly a literal flight through space, a multi-level fantasy which simulates the action of commanding a starship.

The guise under which all of this battling occurs is a mission with a singular purpose: "Destroy all Zylon starships on sight; show no mercy."

The flight begins as you check your position on the Galactic Chart, spot a target zone, make the jump into hyperspace, travel at incredible speeds, and settle into an area full of Zylon ships. Using both computer keyboard and joystick controllers, you observe the oncoming regions with a front view, check on the status of the entire zone with a Long-Range Sector Scan, and, when an enemy ship comes into view, fire!

The business of selecting and tracking targets is accomplished using a data readout located just below your window on space. Longitudinal and latitudinal coordinates are provided regularly throughout the game, alongside the range of the selected target. A Computer Attack Control allows for precise marksmanship in every case.

There is more control in STAR RAIDERS than in any other computer game I've encountered. This control, combined with rich sound effects, fabulous video displays, and a vivid imagination, makes STAR RAIDERS a wonderfully entertaining simulation, an adventure far more engaging than even the best of the video games.

I should point out that this game is comparatively complicated, and may not be for everyone. The instructions, specifically those involved with the movement of your ship through the universe, make this far more than a target game. The maneuvers can be a little tricky, so you should plan to spend about thirty minutes studying the instruction book before you start to play. (It's worth the time and trouble—take this from one who regularly tries to figure out the game and reads the instructions only as a last resort).

PRICE: \$59.95

RATING:

RECOMMENDATION: If this is the sort of game that Atari will produce in the future, a whole new generation of computer games will certainly emerge. Not only is it fun—it's fascinating.

List of Manufacturers' Addresses

APF Electronics Inc.
444 Madison Avenue
New York, NY 10022

Atari, Inc.
Consumer Division
1265 Borregas Avenue
Sunnyvale, CA 94086

Bambino, Inc.
2049 Century Park East
Los Angeles, CA 90067

Bandai America, Inc.
54 Metro Way
Seacaucus, NJ 07094

Castle Toy Company
P.O. Box 90
Newport, RI 02840

Coleco Industries, Inc.
945 Asylum Avenue
Hartford, CT 06108

Entex Industries, Inc.
303 West Boulevard
Compton, CA 90220

Epoch Corporation
230 Park Avenue
New York, NY 10017

Fidelity Electronics
8800 NW 36th Street
Miami, FL 33178

Fundimensions
(Div. CPG Products Corp.)
2650 23-Mile Road
Mount Clemens, MI 48045

GAF Corporation
140 West 51st Street
New York, NY 10020

Ideal Toys Corporation
184-10 Jamaica Avenue
Hollis, NY 11423

Invicta Plastics
200 Fifth Avenue
New York, NY 10010

Kenner Products
1014 Vine Street
Cincinnati, OH 45202

LJN
200 Fifth Avenue
New York, NY 10010

Lakeside Games
(Div. Leisure Dynamics, Inc.)
4400 W. 78th Street
Minneapolis, MN 55435

Magnavox Consumer Electronics
1700 Magnavox Way
Fort Wayne, IN 46804

Mattel Electronics Division
5150 Rosecrans Avenue
Hawthorne, CA 90250

Mego Corporation
41 Madison Avenue
New York, NY 10010

Micro Electronics—see LNJ

Milton Bradley Company
1500 Main St.
Springfield, MA 01101

Parker Brothers
50 Dunham Road
Beverly, MA 01915

Selchow & Richter Company
2215 Union Boulevard
Bay Shore, NY

Texas Instruments
Consumer Electronic Products
P.O. Box 225012
Mail Station 84
Dallas, TX 75265

Tiger Electronic Toys
909 East Orchard Street
Mundelein, IL 60060

Tryom, Inc.
23500 Mercantile Road
Beachwood, OH 44122

Vanity Fair Industries
260 Bethpage Road
Melville, NY 11747

Waddington's House of Games, Inc.
2633 Greenleaf Avenue
Elk Grove Village, IL 60007

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CANADA • \$7.95

THE COMPLETE GUIDE TO ELECTRONIC GAMES

HOWARD J. BLUMENTHAL

This superb, up-to-date guide gives you a complete rundown on all the hundreds of electronic games currently and soon to be available on the market—how each is played, how much each costs, and how each rates in playability and pleasure.

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- 153 black and white photos
- Appendix of manufacturer addresses